

California State Journal of Medicine.

OWNED AND PUBLISHED MONTHLY BY THE

Medical Society of the State of California

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VOL. III

NOVEMBER, 1905.

No. 11

Every practicing physician should have a copy of the United States Pharmacopeia, 8th Decennial Revision.

EDITORIAL NOTES.

In a recent issue of one of the larger medical weeklies—a publication which expressed, through the correspondence of its owner and publisher, an exceeding thoughtfulness for the nostrum manufacturer in his delectable business of exploiting the physician and the patient—appeared an editorial dealing with the subject of those qualities which should be possessed by the ideal medical editor, and inferentially suggesting that very few such eminent editors are known to exist, which statement is probably correct. From the ludicrous egotism of the editorial in question, one might almost be pardoned for a slight suspicion of delusions of grandeur; but we will let that pass. The catalogue of virtues and qualifications of which the happy ideal medical editor should be possessed includes everything desirable except one—honesty. Honesty in dealing between the professional supporters or subscribers and the nostrum advertisers who prey upon them, seems to be ignored. Simple, homely honesty, we are beginning to be taught, is quite commonly ignored in high places. "There exist throughout this country scores of medical journals edited by men whose lack of literary apprenticeship and editorial training is demonstrated on every page." He might well have added that their commercial instinct, their disregard for any ethical, professional or humanitarian consideration, and their absolutely cold-blooded greed, are demonstrated with

equal clearness on almost every page. The ideal, or, if you will, the quite competent medical editor "must recognize that his principal duty is the ignoring of self-interest in his reviews and criticisms," etc. [italics ours]. Exactly. But let him not ignore his self-interest so far as the advertising pages are concerned. Let him accept money from any unscrupulous person who may wish to exploit the medical profession and delude its members into using some worthless nostrum. Let him sit dignified in the editorial chair and ignore the fact that such things as advertising pages exist, and that they not infrequently do great harm to that profession which it is his to serve and guide. It is undignified to take cognizance of such mere business details as advertising pages when learned editorials are to be written and published. It is undignified to observe that the medical profession have been made fools of, for a generation or more, by unscrupulous "manufacturers." It is "sophomoric," "erratic," "puling," "mendacious," "fanatic," "bragging," "defiant," "rabid," "neurotic" and several score more assorted adjectives, to speak out, to call a spade a spade (and not a useful horticultural implement), to say that it is dishonest for medical journals to advertise dishonest or fraudulent articles or such things as do an injury to the public and to the medical profession. This ideal editor would do none of these things. No, indeed! Not because he would ignore self-interest, but because he would have it cultivated to the very highest degree.

We publish a very interesting letter from the medical director of an insurance company doing business in this state, and paying \$3.00 fees for \$5.00 work, on page 367. This letter should be rather a warning to the unfortunate policy holders of this company, for it indicates that a spirit of false economy is actuating the directors in the conduct of the company's business. The investigations of the special commission, in New York, are daily adding to the public store of knowledge of the mismanagement and misappropriation of funds by insurance companies. The policy holders' money is not for the examining physician, nor is it for the policy holder—it is for the directors to use in manipulating deals and in increasing their personal fortunes. Perish the thought that the humble physician, who merely makes the examination on which the issuance of the policy depends, should receive \$5.00 for his services instead of \$3.00! Preposterous! Do the presidents not need an increase in salary? How can they longer continue to live on a paltry \$150,000.00 or so a year? This very company in question is said to have written \$9,000,000.00 worth of insurance last year, and it has also been said that if it increased the fees from \$3.00 to \$5.00, it would have cost the company \$10,000.00. Just think of it! And yet this very company is reported to be making money so fast that it hardly knows what to do with it. But to pay a fee of

\$5.00 for an examination? Impossible! Perhaps some bad risks are taken, as a result of cheap and careless examinations, but who cares? It's only a little of the policy holders' money that is paid out; and at any rate, that \$10,000.00 has been saved.

The next annual session of the State Society, to be held in San Francisco, April 17 to 19, 1906,

will mark the beginning of the second fifty years of its existence.

THE MEETING NEXT YEAR. The committee on program has been at work for some time, and has about decided to arrange for the whole week, providing clinics and hospital work for the days not devoted to the official meetings of the Society—Tuesday, Wednesday and Thursday. Dr. Edward Jackson, of Denver, President of the Rocky Mountain and Inter-State Medical Association, suggested a meeting of that Association with our Society at the time of our meeting, to the end that the matter of forming a Pacific Coast branch of the A. M. A. might be discussed and possibly organized. This matter was presented to the Council at its meeting of September 30th, and was approved. The Council indicated Friday, April 20th, as the day for this special session, and instructed the secretary to have the program printed as a part of the regular program of our own meeting. Thus it would appear from the present condition of things, that the third week in April, 1906, will be a memorable one to our members in many ways. The attendance will undoubtedly be large, and the program offered is expected to be very rich in excellent clinical material and carefully arranged symposia.

That highly upright, virtuous proper, honest and enlightened daily publication, the *San Francisco Chronicle*, seems to have undertaken to establish a semi-scientific medical department.

SAN FRANCISCO CHRONICLE.

In its issue for October 6th, it stated, editorially—and erroneously—that the medical profession of this state endeavored to secure the passage of a bill "to compel persons afflicted with the commonest ailments to procure a prescription, and of course to pay the doctor for prescribing." Referring to "proprietary medicines," it says: "Utterly disregarding the fact that a large number of proprietary medicines [the *Chronicle* undoubtedly means nostrums advertised and sold direct to the laity, for certainly the philanthropic *Chronicle* would not devote its valuable space to a question of purely medical interest and one which did not affect its pocket] are prepared according to formulas which they could not improve upon if they tried, and fully aware that these remedies for the minor and less complicated ills would prove fully as efficacious as any they could prescribe, they persistently seek to proscribe the sale of all patent medicines. Of course the pretense is that the sole object is to guard the

public against the use of pernicious drugs." Now, why does the *Chronicle* make such a bitter and uncalled-for arraignment of the medical profession? Might it possibly be explained if, in the business office of the *Chronicle*, there are a number of contracts bearing this phrase: "It is mutually agreed that this contract is void, if any law is enacted by your State restricting or prohibiting the manufacture or sale of proprietary medicines"?*

The general tone of exalted self-esteem with which the editor of the *Medical Record* disdainfully remarks that its advertising pages are never referred to in the editorial pages, is almost kingly funny. It reminds one strongly of the highly edifying ostrich who buries his head in the sand to avoid the disagreeable incident of being found. But the *Record* has been found out, and its policy of silent contempt will hardly answer. It has disclosed its perfect willingness to take your money for subscription, and then to permit its advertisers to ridicule your national organization in its advertising pages—which are editorially ignored. Of course they are ignored; if the gentlemen in the editorial department did not ignore them, it would be disastrous to editorial dignity. The correspondence between the editor of the *Journal A. M. A.* and the editor of the *Medical Record* is published on another page, and is well worth your attention.

In its issue for October 7th, *Collier's Weekly* began the series of articles by Mr. Adams, revealing the inside rottenness of the nostrum fraud, not only as affecting the general public, but also as it concerns the nostrums exploited to and through the medical profession. These articles should be read by every physician who takes the slightest interest in his profession or in professional decency. It is almost impossible to quote from them without distinct loss, and we have not space to reprint them entirely, though we should be delighted to do so. Mr. Adams shows how the unspeakable nostrum makers practically own and control the newspapers of the country, and through them the state legislatures, and then refers to similar bondage of medical publications. He says: "One might expect from the medical press freedom from such influences. The control is as complete, though exercised by a class of nostrums somewhat differently exploited, but essentially the same. * * * 'Syrup of Figs,' for instance, which makes widespread pretense in the dailies to be an extract of the fig, advertises in the medical journals for what it is, a preparation of senna. Antikamnia * * * for a long time exploited itself to the profession by a campaign of ridiculous extravagance, and is to-day by the extent of its reckless use on the part of ignorant laymen a public menace. * * * There are to-day very few medical publications which do not

*This is the clause referred to as the "Magic Red Clause," by Mr. Samuel Hopkins Adams in *Collier's*, October 7, 1906.

carry advertisements conceived in the same spirit and making much the same exhaustive claims as the ordinary quack 'ads' of the daily press, and still fewer that are free from promises to 'cure' diseases which are incurable by any medicine.* Thus the medical press is as strongly enmeshed by the 'ethical' druggers as the lay press is by Paine, 'Dr.' Kilmer, Lydia Pinkham, Dr. Hartman, 'Hall' of the 'red clause' and the rest of the edifying band of life-savers, leaving no agency to refute the megaphone exploitation of the frauds."

In this article Mr. Adams mentions a few of the rank nostrums which, through the medium of the dirty dollars they pay to medical journals for the purpose of aiding in defrauding the medical profession and the sick by means of advertisements, reading notices and paid-for "original" articles, have been prominent in debauching the profession and enmeshing the medical press in this tight-drawn net of fraud. "Ponds extract," "antikamnia" and "fig syrup" are specifically mentioned. A casual glance through a few of the medical journals at hand discloses the fact that one or more of these nostrums may be found in the advertising pages of the following "enmeshed" journals: *American Journal of Progressive Therapeutics* (truly "progressive"!); *American Medicine* ("founded, owned and controlled by the medical profession of America"?); *Boston Medical and Surgical Journal*; *Canadian Journal of Medicine and Surgery*; *Chicago Medical Times*; *Cleveland Medical Journal*; *Clinical Review*; *Colorado Medical Journal*; *Eclectic Medical Journal*; *Kansas City Medical Record*; *Louisville Monthly Journal of Medicine and Surgery*; *Lancet-Clinic*; *Maryland Medical Journal* (official organ of the state medical organization); *Medical Bulletin*; *Medical Counselor*; *Medical News*; *Medical Record* (too dignified to pay any attention to its advertising pages, and willing to permit its advertisers to insult the medical profession and the American Medical Association); *Medical Times*; *Medicine*; *New Orleans Medical and Surgical Journal* (official organ of the state medical organization); *New York Medical Journal* (its publishers invited the nostrum makers to express their indignation at the formation of the Council on Pharmacy and Chemistry of the A. M. A. in the pages of this journal); *New York Medizinische Monatschrift*; *Pacific Medical Journal*; *Physician and Surgeon*; *St. Louis Medical Review*; *St. Paul Medical Journal* (owned and published by the Ramsy County Medical Society); *Northwest Medicine*; *Medical Sentinel*; *Brooklyn Medical Journal* (published by the Medical Society of the County of Kings); *Journal of the Kansas Medical Society* (official organ of the State Medical Society); *Wisconsin Medical Journal* (official organ of the State Medical Society); *Annals of Gynecology and Pediatrics*; *American Journal of Surgery*; *Illinois Medical Journal* (official organ of the State Medical Society); *Western Medical Review*

(official organ of the Nebraska State Medical Association); *Nashville Journal of Medicine and Surgery*; *Northwestern Lancet* (official organ of Hennepin County Medical Society); *Medical Review of Reviews*; *American Journal of Obstetrics*; *Albany Medical Annals*; and this is not all of them.

Does it begin to be apparent why the medical press is so exceedingly quiet when the subject of nostrum advertising is mentioned?

Drs. Pothier, Hume, Watson and Couret, of New Orleans, announce, in the *Journal A. M. A.*

YELLOW FEVER.

for September 23d, the finding of some previously unnoted bodies in the blood of yellow fever patients during the first four days of the infection. They do not make the definite claim that these are the micro-organisms causative of the disease, but they intimate the possibility. In view of the well-known filter test of the first yellow fever commission under Dr. Reed, it would seem doubtful that these bodies are, at least in the form noted, the responsible organisms. Still, they possess certain characteristics which will probably be noted in the causative micro-organism of yellow fever, when it shall be definitely recognized. If the transmission of a disease from human host to human host requires and necessitates a period of entertainment and change within an intermediate host, it is obvious that the direct transfer of unmodified infected blood from the primary host to a secondary host will not produce the disease. In all known diseases conveyed by an intermediate host, the responsible organism is thoroughly encapsulated, and the removal of this capsule or investing membrane, with the liberation of the contained organism and its subsequent modification and preparation for a second human host, can only take place within the intermediate host. While it may be freely granted that analogy is comparatively valueless in science, still it seems probable that conditions similar to those known to exist in other tropical diseases conveyed to man by an intermediate host will be found to prevail in the case of yellow fever.

We take great pleasure in publishing elsewhere in this issue of the JOURNAL some matter from the *Journal A. M. A.* concerning the "proprietary" known as "Pepto-Mangan (Gude)"—but not "good." The garbled and distorted extract from the report of the Porto Rico Commission has been appearing with regularity in the various representatives of the subsidized medical press of this country, and doubtless a number of honest and confident physicians have been fooled into believing it.

What shall we say of a manufacturer whose love for the medical profession is so great that he will sink to this sort of misrepresentation (to use no harsher word)? For years, this "proprietary" has been widely advertised in medical journals—and in drug store windows to the public. For years

*Among others, the "Butler Positive Treatment," a sure cure for tuberculosis (*Alkaloidal Clinic*), and "Tr. Antidiabetica," a positive specific for Diabetes Mellitus (*Med. Review of Reviews*).

a venal medical press has published endless "reading notices" and whole articles, purporting to be original scientific papers, puffing and lauding "pepto-mangan"; and now we find it, after careful investigation, to be less than half so valuable as other and respectable pharmacopeial preparations of iron. Some years ago a prominent physician in San Francisco took a ward in a hospital, divided it in half, and placed one-half of the patients on "pepto-mangan" and the other half on tincture of the chloride of iron. Careful blood examinations were made, and it was found that the patients receiving the chloride improved; those getting the "pepto-mangan" did not. The dirty money of the unscrupulous manufacturer will do almost anything; it will buy any amount of space in so-called medical journals, and it will enable the spender to present any-old-lie disguised as plausible truth, to the medical profession.

DR. McCORMACK'S ADDRESSES ON ORGANIZATION.

Every physician in the state who has not availed himself of the opportunity to hear Dr. McCormack at one or more of his meetings, has suffered a distinct loss. There is probably no man living in this country to-day who so thoroughly understands existing conditions in the medical profession, or who has given such an object lesson of what an improvement can be secured by careful, persistent, conscientious work. The JOURNAL will endeavor to give an outline of his remarks in this and subsequent issues, but cold type can but faintly imitate the spoken word.

Any attempt to secure necessary or desirable legislation for the protection of the public, if originating in or supported by medical men, will reveal a rather unpleasantly startling condition. Very many legislators will say that while the measure appears to be a good one, their lack of respect for the medical fraternity is such as to make them skeptical of the proposition and of the possibility of there existing some ulterior motive. Further investigation will show that this feeling is shared, in large part, by many laymen other than legislators. Inquiry elicits the fact that this unfavorable opinion results from statements made by physicians themselves. Quite probably the family physician of the legislator in question has told him, of course confidentially, that most of the other physicians in his vicinity are really not up to standard; that such-a-one has made a gross error of diagnosis; that another is disreputable; that still another has lost several patients by careless operations, etc. Another man from the same district, who happens to have a different physician, has been advised that all the other doctors in that community, including the medical adviser of the first man, are not what they should be. And so it goes. In short, the tales and the tittle-tattle of the physicians themselves have destroyed the respect which should be had for them.

In other professions the members are much more harmonious; they dwell together in charity. Why is this? Observation indicates that there is

a lack of harmony and unity in those walks of life wherein the individual leads an isolated life. Doctors but seldom come in contact with each other in the discharge of their professional work. Each one has a certain following which considers him about the best of his kind, and in due course he begins to be possessed of the same idea and to regard his fellow practitioners as rather below him. Added to this must be considered the idle comments of nervous and gossipy old women, who will persist in maligning one physician to another, if the attendant at the time will but listen to them. Thus is still further estrangement produced. Dr. Osler has well pointed out the danger of listening to the disparaging remarks of a patient upon another physician, and it must be remembered that if the patient will rend her previous medical attendants limb from limb, she will doubtless extend the same courtesy at some future time to her present or future physicians.

Only by coming into personal contact at frequent intervals can medical men really know and appreciate each other, and as their occupation does not bring them together in the regular performance of their professional duties, this end should be secured by frequently meeting together in societies. If the physicians of any community exhibit little or no respect for each other, the laymen of that community can hold but little respect for them all as individuals or for the noblest of professions which they are disgracing. This is but natural, and nothing else could be expected. In communities where the medical men are at outs, where they show little if any respect for themselves, each other or their profession, a distinct harm results not only to themselves, but to their patients and the community in general. The physicians in such places tend to reduce their just fees and to cut into each other; they allow quacks to rob the sick and the poor; they resort to or permit contract and lodge practice, a most disastrous and unfortunate evil; in short, they slowly but surely fall below the standard which they should keep up to, and they become less competent doctors. Thus the community suffers not alone a loss in proper respect for what should be regarded as the highest and noblest of professional callings, but it finds itself served by cheap doctors and inefficient ones; by men who, in numerous cases, are so reduced in the financial side of their professional work that they cannot supply themselves with a proper equipment or with sufficient literature to keep abreast of the times.

All of these evil conditions physicians bring upon themselves by and through their ignorance and their petty jealousies, their quarrels and slanderings, their general lack of appreciation of each other and of one another's work. In medical schools, students are not taught, as they should be, the fundamental principles of medical ethics and right conduct; too often they are taught, by word and precept, a spirit of professional jealousy and rivalry, and leave the door of their medical school with anything but a correct appreciation of the medical gentlemen who are connected with

other teaching institutions. Thus at the very commencement of their professional life a wrong start is made, due to an error in education; and they go out into the world to practice, to lead more or less isolated lives, to treasure the spirit of contention, and to add to the disrepute in which our profession is placed by our own members.

In many small towns where two or three physicians are practicing—and fighting—the entire community is rent by these medical dissensions, and men who should be friends and partners in their work, are not on speaking terms, but are detracting each from the standing and the usefulness of the other, and all are equally bringing down reproach and disesteem upon the entire medical profession. People judge of general conditions, very largely, from their own personal experience; it is an axiom that we can only think in terms of our own experience, and if an individual is born into and grows up in a community where the physicians belittle each other, and hence their profession, he will grow to adult life with little or no respect for the entire profession represented—or rather misrepresented—by these quarrelsome doctors.

Financially—and this is an exceedingly important matter—they all suffer. It is important, for the physician should have a sufficient income with which to keep himself up to date; to equip his office with those things which he needs in the proper care and treatment of his patients; to supply himself with sufficient literature to keep his mind educated, and to know what other men are learning and discovering and successfully using. A doctor who is making a bare living, who cannot supply himself with the necessary tools of his profession, is a poor doctor for the community to depend upon. Where there are these baseless quarrels and dissensions, the physicians will not consult or work with each other. When one of them is confronted by a case which he cannot understand, or cannot handle if he does understand it, instead of calling in his neighbor, who possibly is quite competent to handle the case, he sends the patient away to a distant city, and thus turns from the community—and from himself—a certain amount of money that should remain at home. As has been pointed out, the injury is not alone to him or to his colleagues, but to the community as well, for the people do not get the service and the attention from their poorly paid physicians which they are entitled to receive, and which they should pay for. The education of the competent physician never ends, and the day of the ignorant doctor has gone by. But to keep up this education, a certain income is absolutely essential, and to secure this income it is equally essential that harmony take the place of discord, and that strife and misunderstanding give way to peace and understanding.

In the legal profession, we almost never see serious dissension. Lawyers have always worked together in harmony, and it has been said that two lawyers will not quarrel unless both have received a good fee—in advance. If we investigate this, we

quickly see the reason. A lawyer's work brings him constantly into contact and association with other lawyers; his whole life work is a post-graduate education; every trial is a clinic; his education is of necessity and by virtue of the very nature of his calling, constantly uppermost, even though unconsciously so. The lawyer meets his kind every day that he practices his profession; he learns to appreciate his own weaknesses and other men's strength; his mind broadens from day to day and from year to year; he does not lead an isolated life.

Contrast his case with that of the average physician, whose calling forces him to lead an isolated life; who infrequently comes into direct contact with his kind in the course of his work; whose calling is narrowing rather than broadening; whose further education is a matter of direct personal effort, and not a matter incident to his work; who is daily exposed to the temptation of believing the tales and the gossip so generously poured into his ears by irresponsible people. It is estimated that there are over 80,000 physicians in this country who have never belonged to any medical society, and that there are 50,000 who have never taken or received any medical journal save such as may have been gratuitously sent to them, like the *Medical Brief*!

(To be continued.)

SCIENTIFIC WORK MISREPRESENTED AND COMMERCIALIZED.

In pursuance of the deliberately assumed purpose to enlighten the physicians of the United States on all features of the traffic in proprietary remedies, there will be offered to our readers not only information regarding the composition of such remedies, but also facts concerning the methods of their advertising and sale, which come to light in such shape as to be of service to the profession. No firm or product will be subjected to attack, but publicity will be given to all facts obtainable. Having in mind this purpose, the following recital of facts is offered to the profession as an illustration of methods employed in the proprietary trade, and as a step in the era of pharmaceutical publicity.

Under date of December 1, 1904, there was published by the government of Porto Rico a "Report of the Commission for the Study and Treatment of 'Anemia' in Porto Rico." The splendid scientific results of this study of uncinariasis we commented on editorially February 11th, page 478. A few weeks ago the M. J. Breitenbach Company of New York circulated among physicians what purports to be an abstract of this report, claiming that "this report alone would suffice to establish pepto-mangan at once as the foremost hematonic known." Physicians, of course, realize that no other proprietary firm ever had so many "original" "write-ups" inserted in the reading pages of medical journals. It may fairly be said that the medical press has been subsidized by the Breitenbach Company to an extent equaled by no other. So in this instance, medical journals have recently been publishing as "reading notices," or as "publishers' notes," extracts from the company's pamphlet, especially made for the purpose. The Breitenbach Company having, as quoted, staked so much on the results of the commission's use of "pepto-mangan (Gude)," it becomes a matter of medical importance to look into the facts.

The commission treated, so far as covered in this report, 5490 cases of uncinariasis. Of these it presented in detail the clinical histories of 61 cases. In

18 of these 61 cases the commission administered "pepto-mangan (Gude)," which had been donated by the Breitenbach Company. Of these 18 cases the Breitenbach Company says they "were selected on account of their extreme severity, and thus these cases represent the most crucial test to which any iron preparation can be subjected." Further, we are told: "The results obtained point so distinctly to the supremacy of 'pepto-mangan (Gude),' etc., and 'the report may be regarded as a supreme test' and 'as a triumph for pepto-mangan (Gude).'"

With these claims before us it is more than interesting to analyze the reports of the cases from which they are drawn. In 14 of the 18 "pepto-mangan (Gude)" cases that combination was the only iron preparation used; in the remaining 4 Bland's pill was used during the latter part of treatment. In the other 43 cases (not mentioned in the Breitenbach pamphlet) the iron was administered in the form of Vallet's mass or Bland's pill, either or both, with the exception of two cases in which no iron was used. In closing its report the commission notes that iron alone without expulsion of the uncinaria is of little benefit and plays a part secondary to anthelmintics. Therefore, in this "supreme test," the relative value of the hematonic used will be largely determined by the time consumed in relieving the symptomatic anemia after removal of the parasitic cause.

Analyzing the 61 cases the following facts come to light, and it should here be noted that nothing in the original report indicates the "extreme severity" of the "pepto-mangan (Gude)" cases as compared with those in which other iron preparations were used. For the present purpose it is sufficient to compare the "pepto-mangan (Gude)" cases with those in which Bland's pill alone was used:

	Cases.	Av. time of treatment. Days.
"Pepto-mangan (Gude)" cases reported cured	9	79.77
"Pepto-mangan (Gude)" cases reported cured in which Bland's pill was used in latter part of treatment....	5	74.8
Bland's pill cases reported cured.....	26	49

Two "pepto-mangan (Gude)" cases were reported "improved" in an average treatment time of 87 days, while the other two were fatal cases. This "supreme test" then shows that the patients treated with Bland's pill recovered from the anemia in less than

"This editorial brought from the Breitenbach Company a letter addressed to the *Journal of the American Medical Association*, which is worth quoting in this connection and also in connection with the correspondence with the *Medical Record*, which follows. The italics are ours.

"It seems to us, in looking over the issue of your journal for February 11th, that the editorial department of your publication is quite at variance with your advertising pages. A short while ago we sent you a new electrotype stating that pepto-mangan was particularly applicable to the anemia of uncinariasis, and produced positive results if administered after proper treatment for the expulsion of the parasite. We did not make this statement until we had had conclusive proof from tests made by eminent men in the profession that such was the case. We make no haphazard statements ourselves. It is evident that either your editors do not read the advertising pages of your journal, or they wish to make a direct slap at one of their advertisers, and we can hardly see how it is to be any advantage for us to place an advertisement with you, if in the editorial pages you are going to directly contradict our statement. We refer to your editorial on page 478, in which you make the statement, 'The day of blind reliance on iron, quinin and tonics in general in the treatment of anemic conditions in tropical countries is past, never to return,' and this in the face of our advertisement for which we pay you. It looks to us a little like taking our money and in turn going out of your way to slap us in the face, for had that paragraph been omitted from your editorial, we think you will agree with us that the value of the article would in no way have been lessened, and we should feel in a very different frame of mind than we do now. Had it been written by one of your contributors we would have let the statement pass, and set it down to ignorance, but coming as it does from your editors, who should be thoroughly conversant with the advertisements you carry, we cannot but feel that it is very unfriendly toward us.

"We shall be glad to hear from you on the subject."

two-thirds of the time required when "pepto-mangan (Gude)" was used. On this point the commission itself says (page 119): "Thus it is quite difficult to accurately judge the comparative value of different iron preparations, yet it is noticed, even by some patients, that Bland's pill gave more rapid results."

In the face of these clinical facts and of this plain declaration from the commission, the physician may well ask: Why in the name of prudence did the Breitenbach Company circulate a pamphlet and advertise in medical journals a claim that "this report alone would suffice to establish pepto-mangan at once as the foremost hematonic known"? As the report actually draws a contrary lesson, the course of the company can only be explained either as due to its exaggerated confidence in the credulity of physicians or to its own neglect to read the report before abstracting it. Which hypothesis is most probable? Physicians who have read the "write-ups" of "pepto-mangan (Gude)" appearing in nearly all the medical journals of the country will have no difficulty in answering this question. Lastly, what of the honesty of circulating among medical men so misleading a document?—*Journal A. M. A.*, September 23, 1905.

PHARMACOLOGY.

AIBONITO, P. R., September, 18, 1905.

To the Editor:—It has come to our notice that the report of this commission, published December 1, 1904, is being used by the manufacturers of Gude's pepto-mangan to advertise their preparation of iron. As this advertisement puts us in a very unenviable and erroneous light before the medical profession generally, will you be kind enough to publish the following statement?

The advertisement in question purports to be a review of this report and, having attracted attention, proceeds by erroneous deductions and half-quotations in such a manner that one might believe that the commission indorsed their preparation of iron as the best hematonic in the treatment of the anemia of uncinariasis.

As a matter of fact, the report (page 119) clearly states that we found the carbonate of iron to give the best results. Our report, on account of the limited edition, has never reached the majority of our professional brethren, and for this reason we quote the portion referred to:

"It will be noticed that slight cases readily recover without iron, and here the difference in the tables is more marked, while there is less difference among the marked cases in proportion to their number. In other words, the more resistant cases of all grades received iron, but even then did not generally recover as rapidly as those less rebellious without, for while ferruginous preparations seem to act readily in some instances, still, in the majority, its effect was not marked. The rapidity of cure is due, apparently, more to the personal equation of the patient and the rapidity with which the parasites are expelled, than to the amount of reconstructive treatment. Thus it is quite difficult accurately to judge the comparative value of different iron preparations, yet it was noticed, even by some patients, that Bland's pills gave more rapid results."

We do not believe that a perusal of the histories of the eighteen cases which the advertisement quotes demonstrates the superiority of pepto-mangan (Gude), as these patients recovered more slowly than others of the same type who took Bland's pills or Vallet's mass. In fact, on account of this slow recovery the carbonate of iron was substituted for pepto-mangan in five of the eighteen cases (Cases 8, 9, 10, 13 and 15). We ceased to use pepto-mangan and gave none to the later cases.

To support our statement we invite attention to the following figures taken from those given in the very report which the M. J. Breitenbach Co. cite as proving the superiority of their preparation:

There are sixty-one cases reported in full with

complete blood records and clinical histories. In eighteen of them pepto-mangan was used save toward the termination of five of them, when Blaud's pills were substituted. In eleven cases Vallet's mass was used, supplemented by Blaud's pills. In twenty-nine cases Blaud's pills were used exclusively. Three cases have no bearing on the subject.

Reconstructive Treatment.	Pepto-Mangan (Gude).	Blaud's Pills.	Vallet's Mass.
Average hemoglobin before treatment, per cent.	20.7	26.5	18.1
Average number of days under treatment	80.7	47.9	69.8
Average gain in hemoglobin during treatment, per cent.	62.3	66.8	66.6

But to bring out the difference between these drugs more vividly eighteen pairs of cases of like type have been tabulated, whose initial hemoglobins absolutely or nearly correspond. One of each pair was treated by Blaud's pills, the other by pepto-mangan. The demonstration is all the more potent in that both drugs were used in their true role as blood regenerators, in conjunction with thymol administered to both alike.

Case, No.	Form of Iron Used.	Hemoglobin Before Treatment.	Days Under Treatment.	Total Gain Hemoglobin.
1.	Pepto-mangan	33	100	68
56.	Blaud's pills..	33	56	70
3.	Pepto-mangan	25	71	78
52.	Blaud's pills..	25	36	75
4.	Pepto-mangan	28	97	72
50.	Blaud's pills..	27	36	75
6.	Pepto-mangan	22	101	48
25.	Blaud's pills..	22	43	78
7.	Pepto-mangan	10	63	93
28.	Blaud's pills..	11	71	90
8.	Pepto-mangan	34	101	44
46.	Blaud's pills..	35	36	69
9.	Pepto-mangan	20	99	83
43.	Blaud's pills..	20	50	81
10.	Pepto-mangan	20	92	84
51.	Blaud's pills..	20	50	63
11.	Pepto-mangan	32	95	48
47.	Blaud's pills..	32	36	70
12.	Pepto-mangan	27	80	3
53.	Blaud's pills..	25	50	84
13.	Pepto-mangan	14	94	95
23.	Blaud's pills..	14	50	66
14.	Pepto-mangan	16	93	35
45.	Blaud's pills..	16	57	46
15.	Pepto-mangan	11	84	99
22.	Blaud's pills..	12	71	92
16.	Pepto-mangan	20	92	70
60.	Blaud's pills..	19	28	71
17.	Pepto-mangan	9	36	6
21.	Blaud's pills..	13	71	89
18.	Pepto-mangan	16	98	66
59.	Blaud's pills..	18	53	57
19.	Pepto-mangan	28	49	75
42.	Blaud's pills..	31	57	3
33.	Pepto-mangan	9	8	6
20.	Blaud's pills..	22	27	48

That is to say, of eighteen pairs of almost identical cases, the initial average of hemoglobin percentage in the cases treated by Blaud's pills was 21.9; in those treated by pepto-mangan (Gude), 20.7; the average number of days under treatment was 48.7 in the cases treated by Blaud's pills; in those treated by pepto-mangan (Gude), 80.7; the average gain in hemoglobin under Blaud's pills was 68.1 per cent; under pepto-mangan (Gude), 62.3 per cent.

We tried to use a variety of iron preparations and were offered the pepto-manganates made by this company. We had no idea that this preparation differed essentially from any other pepto-manganate of iron, and it certainly may not, but had we considered

the pepto-manganates of superior value as blood regenerators we would have said so. As it is, we have said the contrary and wrote this company to that effect at the time we became convinced of it.

This commission does not wish to be understood to consider the use of reconstructive treatment as a necessity in the anemia of uncinariasis. Such an idea is all the more absurd in view of the fact that in the 12,000 cases treated under its direction since June 1, 1905, comparatively little reconstructive treatment has been used, many cases receiving none at all. As our experience with this disease widens, our opinion is strengthened that anthelmintic treatment is not only curative, but promptly so, in the vast majority of cases, iron or no iron. Thanking you in advance for the use of your columns,

We are, very truly yours,

BAILEY K. ASHFORD,

W. W. KING,

PEDRO GUTIERREZ YGARAVIDEZ,

Members of the Commission.

Journal A. M. A., Oct. 7, 1905.

THE MEDICAL RECORD AND THE PROPAGANDA AGAINST NOSTRUMS.

A little while ago the New York Medical Record contained a two-page advertisement of the Etna Chemical Company, which evidently was intended to counteract the effect of the report of the Council on Pharmacy and Chemistry which showed phenalgin to be a simple acetanilid mixture. Still more recently the same journal contained another two-page advertisement, one of which was occupied with a cartoon intended to cast ridicule on the efforts being made against the nostrum evil. Since these advertisements appeared in a scientific medical journal and a journal that is supposed to represent intelligent physicians, one might charitably suppose that they were admitted through lack of supervision. Such does not appear to be the case, however.

Under date of September 8th, the editor of the Journal of the American Medical Association sent the following letter to the Medical Record:

To the Editor: Your issue for last week, September 2d, contains a two-page advertisement of the Etna Chemical Company relating to their preparation, phenalgin. One page is entirely taken up with a cartoon evidently intended to deride the Journal of the American Medical Association, the Council on Pharmacy and Chemistry of the American Medical Association, and the propaganda against nostrums. The other page contains what is presumed to be an answer to the official announcement of the Committee on Chemistry regarding its investigation into certain preparations offered to the profession and to the public, especially as it is related to phenalgin. Permit me to quote from the advertisement as it appears on advertising page 21 of the Record: "Recently certain ill-advised persons have attempted to confuse Phenalgin with patent and quack Nostrums, and have so far succeeded that the influence of the Journal of the American Medical Association has been brought to bear against our legitimate and ethical business."

"We believe that Commercialism of the rankest kind has dominated this absurd crusade against us. These people may call Phenalgin a mixture, or a compound, or anything that pleases them; it does not in the least change the fact that Phenalgin is just what we have always said it to be."

"We know that doctors who are practicing medicine and prescribing Phenalgin will continue to do so regardless of the reports of alleged analytical chemists whose experience in the sick room is an atom of a myth compared with that of those who are continually using our product."

My object in writing you is to briefly state certain facts solely for the information of your readers.

What the Council on Pharmacy and Chemistry of the American Medical Association is and what its functions are are well known to your readers. While the council has been outlining plans for work, making investigation into various products, it has published but one official report; this was on six preparations, viz.: ammonol, antikanina, Koehler's headache powders, orangeine, phenalgin and salacatin (sal-codeia-Bell). The report on phenalgin was as follows:

"According to the analysis of the contents of the original sealed packages as purchased, this was found to be a mixture, and to contain the following ingredients approximately in the proportions given:

Acetanilid.	Sodium bicarb.	Ammonium carb.
67	29	10

"Certain packages of phenalgin were purchased which on analysis did not show ammonium carbonate."

The committee signing the report¹ and vouching for its truthfulness consisted of:

J. H. Long, M. S., Sc. D., professor of chemistry in the Northwestern University Medical School and director of its chemical laboratories, the author of "A Text-Book of Physiological Chemistry" and other works on chemistry, and, last year, president of the American Chemical Society;

W. A. Puckner, Ph. G., professor of chemistry in the School of Pharmacy of the University of Illinois, and a contributor of scientific articles to chemical journals;

S. P. Sadtler, Ph. D., professor of chemistry in the Philadelphia College of Pharmacy, author of "A Text-Book on Chemistry," associate editor of the U. S. Dispensatory, and a member of the Committee on Revision of the U. S. Pharmacopoeia;

Julius Stieglitz, Ph. D., professor of chemistry in the University of Chicago, a man of wide reputation as a chemist, and the author of several works on chemistry; and

H. W. Wiley, M. D., Ph. D., chief of the Bureau of Chemistry of the Department of Agriculture, Washington, D. C.

Besides the above, other chemists assisted in the work, and the following made analyses of phenalgin:

H. M. Gordin, Ph. D. (Berne), professor of chemistry in the School of Pharmacy of the Northwestern University, who has done a large amount of original work, as his contributions to chemical literature will show; and

Max D. Sillmer, B. S. M. A. (University of Chicago), Ph. D. (Berlin), who has several fellowships in chemistry in the University of Chicago, who has done considerable original work in chemistry, and who is recognized as an honorable and capable analytical and consulting chemist.

These are the gentlemen referred to in the advertisement in the *Medical Record* as "alleged analytical chemists."

In a former advertisement the Etna Chemical Company says: "We protest against the association of Phenalgin in that publication" (meaning the *Journal of the American Medical Association*) "with patent medicines and nostrums as an uncalled-for insult to a reputable American Manufacturing Chemical Industry."

In this statement, the Etna Chemical Company gives physicians the right to ask whether it is "reputable" to inveigle them into prescribing a simple acetanilid mixture under the supposition that it is a definite synthetic chemical substance and to charge a dollar an ounce for a preparation the ingredients of which cost less than five cents.

There is, however, one assertion made in the advertisement which, I think, is well taken. The preparation is certainly not now a "secret remedy," for the Council on Pharmacy and Chemistry has cleared up all doubts as to the composition of "ammoniated-phenylacetamide."

Since you did not see fit to publish, or mention, the report referred to above, but have allowed your advertising pages to be used to slur the Council on Pharmacy and Chemistry of the American Medical Association, as well as the *Journal of the American Medical Association*, I think it only fair to your readers that they be informed of the facts in the case, as far as they refer to phenalgin. I, therefore, ask that you kindly publish this.

To the above the editor of the *Medical Record* replied under date of September 12th:

"It has always been the aim of the editor of the *Medical Record* to keep the editorial and advertising pages of the journal entirely distinct, and in continuing that policy I am forced regretfully to return your letter replying to an advertisement in the issue of September 2d. If there should at any time be anything in the reading pages of the *Medical Record* relating to you or the Association whose interests you guard so well, to which you might take exception, I promise you the opportunity to reply fully and freely; but I am not responsible for what appears in the advertising pages, and cannot open the correspondence department to letters in commendation or condemnation of anything appearing in that part of the journal. I regret the seeming discourtesy to you, but you surely can see to what abuses it might lead were correspondents permitted to discuss in the reading pages the statements made by advertisers.

THOMAS L. STEDMAN.

"P. S.—If you publish this letter in your own journal or elsewhere, I trust you will, in justice to the *Medical Record* and to me, publish also this letter giving my reason for refusing you the hospitality of our columns.

"T. L. S."

We are very glad to know that "the editorial and advertising pages of" the *Medical Record* are "entirely distinct." Since antikhanna, ammonal, phenalgin and salacatin, in the form of sal-codala-Bell, each occupies from a half to a page in the *Record*, some physicians were unkind enough to insinuate that this was the reason the editor totally ignored the report which exposed these preparations. Dr. Stedman's letter shows that this could not be, since the editorial and advertising departments are "entirely distinct."—*Journal A. M. A.*, September 23, 1905.

¹ *Journal A. M. A.*, June 3, 1905, p. 1791.

HERZSTEIN LECTURES IN THE UNIVERSITY OF CALIFORNIA FOR 1905.

Special Chemical Problems Related to Practical Medicine.

Synopsis furnished to the JOURNAL by the lecturer.

LECTURE I.

The Toxic Agent in Gastro-Intestinal Autointoxication.

By ALONZO ENGLEBERT TAYLOR.

Gastro-intestinal autointoxication must be separated from exogenous intoxications, especially from decomposed food. It is to be distinguished from the gastro-intestinal infections, for which we assume that they cause disease by the elaboration of specific toxic substances. That gastro-intestinal as well as the systemic infections do entrain real autointoxications by disturbing the natural progression of metabolism, cannot be disputed. Gastro-intestinal autointoxication ought to be separated from indigestion, dyspepsia, gastritis, and enteritis. For these diseases still more than for the specific infections is it certain that autointoxications may constitute a fraction of the morbid consequences.

By gastro-intestinal autointoxication we understand therefore an intoxication that arises in the course of the digestion of normal food, and independent of any exogenous intoxication, of every known exogenous infection, and of enteritis except such as may be *sui generis*. The hypothetical agent must be a substance originated within the alimentary tract. It cannot be denied that an autointoxication may result from every alimentary infection and enteritis, since the diseased tissues may do their work improperly. But in any event it would be secondary and not the primary cause of the disease.

A discussion of the hypothetical agent in gastro-intestinal autointoxication in the strict sense may be divided into five headings—Digestive Fluids and Secretions; Normal Products of Digestion; Abnormal Products of Digestion; Substances Formed Normally From Food by Bacteria Within the Alimentary Tract; and Abnormal Products of Bacterial Disintegration of normal food.

Intoxication by Resorption of the Digestive Juices. The digestive enzymes and juices have a certain toxicity independent of their salts and reaction. It is by some assumed that these substances are in normal life resorbed and rendered harmless by some process of distoxication. It was assumed that the postulated distoxication might become disturbed and an autointoxication result. For the assumption that the ferments are resorbed from the alimentary tract, there is no foundation. If the circulating ferments of the body are to be regarded as derived from the digestive glands, it is more natural to assume that they have passed into the circulation directly from the glands than to assume a secondary resorption from the lumen of the tract. Ferments are colloids and as such unadapted to absorption. The pepsin and curdling ferment are digested by the trypsin; the salivary ferments are digested by the pepsin. These ferments are furthermore, with those of the pancreas and succus entericus, exposed to putrefaction by bacteria, to which they are very sensitive. There is not a single reported experimental fact, exact observation or clinical fact that is explained by the assumption of the resorption and non-distoxication of the digestive juices.

The Products of Normal Digestion. Some of these are toxic. The albumoses and peptones produce fever, leukocytosis, alterations in the coagulability of the blood, hemolysis and cellular degenerations of mild degree. In the severe degenerative diseases, as acute yellow atrophy of the liver, acute pancreatitis and septic exudations, these proteins may be found in the blood plasma. There is no experimental work or clinical investigation tending to show that these

lower proteins are responsible for any gastro-intestinal autointoxication.

The amido acids are quite innocuous. Amido nitrogen is found in all organs and in the circulation. In conditions attended with excesses of cellular degeneration, as in acute yellow atrophy of the liver, large quantities of these substances have been found in the blood and the tissues. There are no reported analyses tending to show that in connection with gastro-intestinal autointoxications the content of amido nitrogen in the blood or urine is increased.

Theoretically such a modus of autointoxication would be possible if the products of the digestion of protein were not reconverted into higher protein during the act of resorption. If because of ulceration or for any reason the protein were absorbed unchanged, or the products of digestion absorbed without reversion, an intoxication of the liver might ensue. Such a condition would be comparable to the intoxication produced by the anastomosis of the portal vein and the inferior cava, so that the portal blood is poured into the general circulation without having been subjected to the action of the liver. There is no data tending to show that this condition of malabsorption ever occurs.

The products of the digestion of fats must also be held guiltless. Glycerine is somewhat toxic. There is normally no glycerine in the urine. Since the fats are found resynthesized in the retro-peritoneal lymph vessels, it is apparent that the glycerine split off during the digestion has been again used in the recombination. The fatty acids themselves cannot be a factor, because when administered they are easily absorbed and converted into fats by the addition of glycerine.

The products of the digestion of carbohydrates are entirely innocuous.

Abnormal Products of Digestion. Of qualitative variations in the digestion of protein we know nothing. It is conceivable that in abnormal conditions the products of digestion might suffer some chemical alterations either within the tract or during the process of absorption. We have no facts that indicate that such is the case. There is in the digestion of fats one recognized possibility for an abnormal deviation—the formation of β -oxybutyric and di-acetic acids. There is one group of cases of acetonuria associated with gastro-intestinal symptoms, which may be of gastro-intestinal origin. In connection with the digestion of carbohydrate, it must be borne in mind that a gastro-intestinal oxaluria is theoretically possible, the oxalic acid being derived from glucose.

Substances Formed by Bacteria from Normal Food Within the Alimentary Tract. The material consumed in these operations is not large; over nine-tenths of the food is absorbed in digestion and the larger portion of the remainder is residual in the feces. This is not due to the antiseptic properties of the digestive juices (which are not pronounced), but to the rapidity of the processes of digestion and absorption, and to the brief residence of the residue in the tract. Associated with the bacterial processes is a stimulation of peristalsis.

Do the products of the normal bacterial disintegration of normal food give rise to intoxications? Under conditions of increased virulency upon the part of the bacteria normally present, are not greater quantities of the normal products generated, with the causation of an intoxication? The products of the normal fermentation and putrefaction within the alimentary tract are, so far as we are cognizant of them, the following: From the fermentation of carbohydrates are derived formic, acetic, butyric, propionic, valerianic, lactic, succinic, and traces of oxalic acids. Apart from oxalic acid, none of these are toxic beyond their acidity. The quantities formed are not large. They are in large part absorbed. Their neutralization and oxidation entrain no metabolic difficulties and we may regard them as innocuous. The same acids could in part, together with oxyacids, be derived from the bacterial disintegration

of the fats. This occurs to but slight extent, since fatty acids are very difficult of fermentation. The putrefaction of protein yields the derivatives of the benzol nucleus—indol, skatol, phenol, and cresol; amido-acids, such as leucin, tyrosin, asparaginic and glutamic acids; hexone bases; sulphurous bodies such as mercaptan, hydrogen disulphide, and other unclassified bodies containing neutral sulphur. Indol, skatol, phenol and cresol are in the quantities concerned quite non-toxic. The amido-acids are quite harmless; they are absorbed and either elaborated or oxidized. The sulphur bodies are of unknown importance. Hydrogen disulphide is toxic, but the quantities concerned are so trivial that the body can have no difficulty in burning them. The carbon dioxide, nitrogen, acetone, alcohol, methane, and other hydrocarbon gases that exist in greater or lesser traces are also not to be convicted of any toxic effects.

Thus the sum total of our present knowledge is that in the normal bacterial disintegration of normal food-stuffs no known toxic substance is formed. Are these bacterial processes some times so excessive as to cause a direct intoxication? In infantile enterocolitis the organic acids may be produced in excessive quantities. Possibly these are responsible for some of the acid intoxications observed in children. We do not know whether these fatty acids cause acidosis, or whether it is always due to the acids of the acetone group. Intoxication with hydrogen disulphide occurs certainly, though rarely. Large quantities of lactic acid are some times found in the stomach; indeed there are paroxysmal attacks accompanied by excessive formation of this acid. There is no evidence that it is absorbed, since the lactic acid met with in the urine is optically active, while that obtained from the stomach is inactive.

In many conditions of the alimentary tract the benzol derivatives are increased in the urine. This should be interpreted to mean nothing more than that the bacterial processes in the intestine are increased; it is not in itself a sign of autointoxication. If the pancreatic duct be ligated, the conjugated sulphates will sink to almost nothing; the bacteria act not on the protein but most energetically upon the products of pancreatic digestion. Indol and skatol are products of the action of bacteria on tryptophan, an end product of tryptic digestion. They are for the most part absorbed, eliminated paired with sulphuric and to some extent with glycuronic acid and in small part as oxyacids. Skatol-carboxylic acid is in part eliminated as a salt, in part oxidized. The phenol and cresol are derived from tyrosin. They are absorbed, in large part oxidized to hypochinon and pyrocatechin (which pair with sulphuric acid); the rest is eliminated paired with sulphuric and glycuronic acid. Para-oxy-phenyl-acetic and propionic acids, intermediary products in the derivation of phenol from tyrosin, appear as salts in the urine, but bear no constant relation to either the tyrosin or the phenol. Hippuric acid, apart from that obtained from the vegetable diet, is probably derived from phenyl-alanin. The conjugation of the aromatic bodies occurs largely in the liver, to some extent in the lungs and kidneys; the oxidations occur in large part in the liver.

These substances are influenced by the diet. Deficiency in intestinal absorption would tend to an increase in the products of putrefaction. Animal protein is more prone to putrefaction than vegetable protein. There are variations within the molecule; the different amido-acids are present in different proportions in different amounts. Thus gelatine is poor in tyrosin, casein rich in it; putrefaction of gelatine would therefore yield little phenol and cresol, that of casein much. Future investigation must give attention to this aspect of the question.

Intestinal putrefaction is dependent on the diet apart from protein. The ingestion of carbohydrate tends to reduce the putrefactive processes, presumably by virtue of the acids of fermentation. In starvation the putrefaction is low.

There is normally little putrefaction but much

fermentation in the small intestine. Obstruction of the colon leads to little increase in putrefaction; obstruction of the small intestine leads to a morbid increase; diarrhea usually leads to a diminution of putrefaction, but in typhoid fever, dysentery and intestinal tuberculosis we often observe an increase. There is no relation between gastric acidity and intestinal putrefaction; the hydrochloric acid is too distant from the colon. There is no constant relation between intestinal putrefaction and the biliary secretion; there is an antiseptic tendency in the bile, but it is not pronounced.

The flora of the alimentary tract is of great importance. Certain of the actively putrefying anaerobic bacteria produce no indol or skatol but much phenol; the colon bacillus is an active producer of indol. Variations in the flora may be of determining influence in the quantitative relations of the different aromatic substances.

There is no constant relation between the protein ration and the output of aromatic substances. The indol and skatol do not bear a constant relation; the same is true for the phenol and cresol, for the indol and phenol. No one single aromatic substance bears a constant relation to the total conjugated sulphates; this is to be emphasized for indican. One cannot judge of the total paired sulphates from the indican; one may see high indicanuria with a low total, or high values for the total with but traces of indican. There is no constant relation between the aromatic substances and the bacterial count of the feces. The least faulty method of determining the extent of intestinal putrefaction is by the estimation of the conjugated sulphates. Nevertheless this may yield a totally false interpretation. One sees individuals in perfect health who eliminate large quantities of aromatic substances.

What is then the exact meaning of an increase in benzol derivatives in the urine? A normal output need not indicate a normal state of intestinal putrefaction; an excessive output indicates that more protein than usual is undergoing putrefaction in the alimentary tract. This may be due simply to some individual idiosyncrasy, to peculiarities in the diet, to a heightened virulence of the bacterial flora, to the presence of a particular bacterium, or to the retention of the food in the tract. Does it indicate an intoxication? No. A certain amount of intestinal putrefaction is normal; an increase may be entirely accidental or coincidental. A constant relation between putrefaction and intoxication could hold only if the aromatic bodies were in themselves toxic, if the process of oxidation and pairing were deleterious to the body, or if the formation of the aromatic substances bore a constant relation to the elaboration of some unknown poison and to the symptoms. There is no evidence that the substances are themselves toxic to any degree, or that the conjugation places any burden upon the body. We have no method of estimating the quantity of aromatic bodies that are eliminated with glycuronic acid. We have further no feasible method of estimating the oxidized aromatic substances. There is in clinical observations no parallelism between symptoms and conjugated sulphates in the urine, either in degree or in the onset and disappearance. What is all along actually assumed is that other substances, poisons, are produced by the putrefaction; and as the degree of putrefaction may be often approximately measured by the aromatic substances, the degree of the hypothetical unknown poisoning is also so measured.

This is misleading; we do not know how much of these substances is absorbed from the intestine, how much the particular flora tends to the formation of aromatic bodies, to what extent the diet furnishes tyrosin and tryptophan. Thus chemical and physiological considerations lead to the same conclusion reached by careful clinical observations—that the estimation of indican is quite worthless and the estimation of the aromatic sulphates unreliable for the purpose of determining the relative or absolute extent of intestinal putrefaction.

Abnormal Products. When proteins are subjected to putrefaction, a large number of alkaloid-like substances are formed, commonly termed ptomaines. They include a large number of substances of the fatty series, amines, members of the pyridin nucleus and of the chinolin series. Most of these ptomaines are innocuous. None of them except the simple amines have ever been found in the urine or feces of normal individuals or of those suffering from any diseases except cholera, idiopathic cystinuria (occasionally dysentery, enteritis and obstruction) and true ptomain poisoning due to the ingestion of decomposed protein. Time is required for the elaboration of ptomaines, particularly the toxic ones; in general no poisonous bases are formed in less than ten days; in some of the well-studied cases of ptomain poisoning due to the ingestion of decomposed food, the analytically incriminated foods have been however but a few days old. We know of many undoubted instances of ptomain poisoning due to the ingestion of decomposed food. We possess no information that in the so-called gastro-intestinal auto-intoxications (the ingestion of decomposed foods must be excluded) ptomaines have ever been found. Since a certain decomposition of food occurs within the alimentary tract and the degree of this decomposition may be increased under certain conditions, we are driven to the conclusion either (a) that there is not time for these changes to proceed to the stage of ptomain formation, (b) the ptomaines are decomposed in the system or (c) the decomposition of protein is different in the intestine than outside the body. The last conjecture may be dismissed. We are left to choose between the other alternatives: either ptomaines are not formed in the alimentary tract (apart from the known instances in cholera, idiopathic cystinuria, and occasional cases of dysentery and enteritis) or they are formed and distoxicated. What evidence is there that ptomaines are formed and later distoxicated? In experimental work ptomaines are eliminated in the urine just as in idiopathic cystinuria. For the diagnosis of ptomain poisoning—as for any other poisoning—the presence of the poison must be demonstrated. Such chemical demonstration has, as stated, never been accomplished for the class of cases under discussion. The strict conclusion to be drawn from our present knowledge is that the term "ptomain poisoning" should be confined to instances of intoxication due to the ingestion of decomposed protein and accompanied by the elimination of the poison, and to such instances of decomposition within the tract in which toxic ptomaines may be isolated. The presence of cadaverin and putrescin would mean little, for apart from their harmless roles in cystinuria, they are to be found in old digestion experiments, where they are derived by fermentation of lysin and ornithin, and thus they do not necessarily indicate an abnormal bacterial decomposition. The neurine group have been considered responsible for some of the symptoms of Addison's disease, though without chemical demonstration.

Is it permissible to use the therapeutic test in the diagnosis, may the results of the administration of antiseptics be interpreted in aid of a positive diagnosis? Is it possible to reduce the number of intestinal bacteria, to modify the quantity or quality of their chemical products by means of these drugs?

Control must be exercised in the test. The diet must be constant in composition and quantity, since the bacterial count depends in part on this, and it must be sterile. The estimation of the bacteria is of great difficulty. Counting the bacteria in the fresh stools is very difficult and unreliable. Plating and counting the colonies is also unreliable. The method of weighing the bacteria, though difficult, is the least inaccurate of the known methods.

Now before one passes judgment on the action of an antiseptic, one must be certain that its sole action is upon the bacteria. Anything that checks diarrhea will reduce the daily output of bacteria, but may

increase the output of aromatic bodies in the urine. Anything that will promote the percentage or time absorption of protein will reduce the output of bacteria and tend to reduce the elimination of aromatic substances. Thus the output of bacteria is usually low in constipation, though the elimination of aromatic substances may be high. Anything that tends to the desiccation of the stools will tend to reduce the bacterial output; anything that makes the stools watery tends to increase the bacterial output. Above all, the drug should not exert any deleterious action upon the epithelium of the tract.

Now as a concrete fact, is there any work showing that under the proper restrictions of experimentation the bacterial count of the alimentary tract can be reduced by an intestinal antiseptic? No. Usually the result is nil. As a rule the drug does not reach even the lower part of the small intestine, to say nothing of the colon, unaltered. When the dosage of the antiseptic is so increased as to make the drug chemically demonstrable in the entire tract, the action on the epithelium is so deleterious as to materially reduce the resorption of the food, with the result that conditions for bacterial multiplication are made more favorable and the number is often greatly increased. Between the bacterial count and the amount of elimination of aromatic sulphates in the urine there seems to be absolutely no relationship, nor could such be expected, when they possess different variables. So far as we know to-day diet and the improvement of the acts of digestion are the only known means of controlling the bacterial flora of the alimentary tract.

What reliance may be placed upon the urotoxic coefficient in diagnosis? The toxicity of human urine on injection into rabbits is due in large part to the electrolytes, and depends upon the injection of a hypertonic solution rich in potassium. When these two factors are controlled, there is little toxicity remaining. The toxicity of the organic constituents is very slight. The relative innocuousness of the end products of the human metabolism is shown in the fact, that calculating the dosage from the rabbit, a healthy person could receive without danger the end products of two weeks of metabolism. Now is this urinary toxicity increased in the urine of the cases under discussion? It is not. Whenever the cases have been studied with due care negative results have been secured. This simply means that the urotoxic coefficient may not be used for purposes of diagnosis; it does not mean that no intoxication has taken place because the urine has not increased in toxicity. The possibility of a systemic intoxication is not to be denied, but there must be some objective evidence offered for it, and this has not up to the present been forthcoming.

There are several clinical symptom-complexes in which, though the term ptomain poisoning is improper, there are, even in the absence of any knowledge of the toxicological agent, reasons of fact and analogy that furnish some warrant for the use of the term gastro-intestinal auto-intoxication. What is needed in these domains is exact investigations,—objective clinical observation and accurate chemical research.

Tetany. The tetanias associated with extirpation of the para-thyroid, intestinal parasites, pregnancy and lactation, acute infections, exogenous intoxications, rachitis, and the so-called epidemic or occupational variety can have no dependence upon the digestive tract. Typical tetany of the severe form occurring in adults in association with gastric dilatation is rare and very fatal. To determine whether the processes in the dilated stomach have gone to the stage of the production of poisons, the gastric contents and urine have been investigated. In a few instances uncharacterized substances have been obtained from the gastric contents that were somewhat toxic to rabbits; in other cases the substances were innocuous. From the urine in a few cases substances have been isolated that gave group re-

actions of amines but were not toxic on intravenous injection in rabbits. Up to the present therefore a ptomain or other toxic agent has not been demonstrated for tetany. The tetany of children associated with gastro-intestinal symptoms and diseases is often accompanied by acidosis, and an excess of ammonia and of aromatic bodies in the urine. The association with the acidosis is of slight moment, since acidosis is very common in children in subnutrition.

The Alimentary Tract. Commonly regarded as gastro-intestinal intoxications are certain gastro-intestinal attacks associated with cutaneous symptoms. The symptoms are pain, vomiting, often diarrhea, fever, followed by a general erythema, urticaria, or giant odema, possibly by other exanthemata. Desquamation may follow. The symptoms resemble closely intoxication with shell fish in susceptible individuals. Recovery usually follows promptly after gastric and colonic lavage and free purgation. Ptomain or other poisons have never been reported in the contents of the tract or urine. I am acquainted with one case in which a careful search was made with negative results.

Instances of severe violent disturbances in the alimentary tract are observed that bear all the external marks of an intoxication. The attacks consist of sudden vomiting which may be uncontrollable, extreme pain, profuse diarrhea in some cases, and in other spasms of the intestine with meteorism, vertigo, vaso-motor dilatation, shock, local spasms, even convulsions and coma. If it is possible to exclude exogenous intoxication, the assumption of a gastro-intestinal auto-intoxication is justified even though a chemical investigation (which has apparently never been attempted) should fail to isolate any known poison. The recurrent vomiting of children is not gastro-intestinal in origin, but is probably a symptom of metabolic acidosis.

In connection with subacute obstruction of the stomach or intestine, symptoms suggesting gastro-intestinal auto-intoxication are sometimes noticed. The differences in the appearances in patients with gastric carcinoma before and after gastro-duodenostomy is usually so striking that one is driven to question whether they are to be explained by the conditions of nutrition and are not due in part to the removal of conditions of decomposition in the stomach. Nevertheless the definite demonstration is wanting, though often attempted.

Constipation. Under constipation is understood that degree of infrequency in the evacuations of the bowels that is accompanied by symptoms which are relieved by an evacuation. This may be twice a day, it may be twice a week. There are individuals who have movements of the bowels twice weekly and remain in perfect health; others have symptoms of constipation if the bowels are not evacuated after each meal. The symptoms are usually removed by evacuation of the rectal and sigmoid cavities. What is the evidence for a chemical intoxication? The diagnosis of auto-intoxication cannot rest upon an excess of indican or other aromatic bodies in the urine. The elimination of the aromatic bodies bears no constant relation to the presence or absence of constipation; nor does the degree of increase in the aromatic substances in the urine bear any relation to the intensity of the symptoms. As previously stated, indicanuria is not a sign of auto-intoxication nor does it afford any index of the elimination of other and toxic substances. The urine and feces of cases of constipation have been studied for the presence of ptomain or other poisons without success. The fictitious value of the interpretation of the symptoms of constipation is afforded by the fact that they are at all times more pronounced in women than in men, and particularly marked during the menstrual period. It is also noteworthy that many of the symptoms of constipation are to be observed in association with abdominal and pelvic diseases unaccompanied by constipation. A recent

suggestion is that the evil results of constipation may be due to the non-secretion by the intestinal mucosa of toxic excrementitious substances, whose elimination is assumed to be a function of the intestine. For this hypothesis there is no evidence.

The necessity for caution in the interpretations of symptoms is nowhere more to be noted than in the consideration of the chemico-toxic features of constipation. In constipation there is no regular increase in the amount of benzol derivatives in the urine. There is no constant increase in the number of bacteria in the intestine, rather the converse. In constipation there is no increase in the toxicity of the feces or of the urine. We see women with inflammatory pelvic disease suffer severely from constipation, and later observe that after the removal of the diseased pelvic organs, the same constipation gives no symptoms. The same observation is made in appendicitis. It is the inflammation of the appendix that endows many a case of constipation with the power of producing symptoms. If a constipated colon, dilated with gas, tracts a chronically inflamed appendix, that is not an intoxication, it is not due to the chemical composition of the colonic gases, or to the chemical properties of the products of protein disintegration within the colon; it is a mechanical condition and after the removal of the appendix, such symptoms will usually not result from an ordinary constipation. Our present best knowledge of appendicitis goes to show that the disease is in all its relations and symptoms a bacterial infection, and in nowise an auto-intoxication, no more so than a septic endocarditis or a cholecystitis. There is no denial of the symptoms of pronounced constipation. But there must be objective investigation of the cause of these symptoms. They cannot be assumed to be chemical, toxic; this must be shown. If we are to assume that a train of symptoms is the result per se of the simple over-retention of the fecal residue of a normal diet in the lower colon, we are utterly at a loss to understand the innumerable instances in which pronounced degrees of such retention give no symptoms. The true cases of intoxication from constipation will probably be found to be associated with particular articles of food, though this and the exact investigation of the stools are matters for future development. But the current use of the term ptomain poisoning as applied to constipation, is directly contraindicated.

Nervous Dyspepsia. This has been classed as a gastro-intestinal auto-intoxication. There is no good evidence that an auto-intoxication is present. It will not do to say that since we know nothing of else it must be an auto-intoxication; if we do not know of anything else and there is no exact evidence of an intoxication, we simply do not know the cause at all.

Nervous System. For the etiology of a large number of diseases of the nervous system (migraine, neuritis, epilepsy, myasthenia, melancholia, dementia, paralytic, psychoses, and even periodic familial paralysis) gastro-intestinal auto-intoxication has been invoked. The alleged evidence comprises analogies between these diseases and conditions in the nervous system due to known poisons, the occurrence of constipation and often of an excessive elimination of aromatic substances, the occasional occurrence of acetoneuria, the apparent relation of attacks to dietetic errors, the finding in nerve cells of lesions resembling those produced by experimental intoxications, and in the results of the measurement of the toxicity of the urine and in some cases of the perspiration. This evidence is worthless, of exact investigations there are none.

From the urine of persons suffering from diseases of this class (as of all the assumed varieties of gastro-intestinal auto-intoxication) a large number of alleged poisons have been reported as isolated; analysis of the reports and repetition of the procedures, show the chemical manipulations to have been worthless.

The Anemias. The earlier theory of the gastro-intestinal origin of chlorosis is now disproved. For pernicious anemia however a good case has been made out. That a persistent hemolysis is at the bottom of pernicious anemia is shown by the excessive elimination of hemoglobin derivatives in the feces and urine, the siderosis, the experimental work with toulylen-diamine, and the close resemblance to ancylostomae anemia. Extracts of this parasite are known to be hemolytic. Now hemolysis is one of our best studied effects of poisons, and with the demonstration of the occurrence of a severe and persistent hemolysis as the cardinal feature of the disease, a reasonable etiology is established. The earlier work made it probable that the poison was absorbed from the alimentary tract. This has been supported by the experiments with toulylen-diamine as well as by the analogy with the ancylostomae anemia. Concerning the nature of the hemolytic agent we know nothing. A ptomain it certainly is not. For leukemia we have no exact knowledge.

Asthma Dyspepticum. Is there a dyspnea of toxic gastro-intestinal origin? The experimental foundation for such a conception is to be found in the observation that in dogs with an Eck's fistula the ingestion of bouillon or meat is followed by acute dyspnea. Attacks of acute dyspnea have been described associated with alimentary disturbances and unaccompanied by any lesions in the thoracic organs or kidneys. A close connection exists between the diet and exacerbations in the attacks. No poisons have been isolated.

Gastro-Intestinal Albuminuria. The kidneys are sensitive to poisons. Albuminuria is common in poisoning by shell fish and decomposed foods. There can be no strong objection to this classification of the instances of albuminuria that occur in well-defined cases of gastro-intestinal diseases. But to go to the extent of the assumption, without exact evidence, that the so-called idiopathic, cyclic and recurrent albuminuria rest upon an otherwise unmanifested gastro-intestinal auto-intoxication, is unjustified.

Excision of the Cervical Portion of the Esophagus.

W. I. Terry, San Francisco (*Journal A. M. A.*, September 30th), reports a case of extirpation at one operation of both submaxillary glands, the remnant of the epiglottis, the hyoid bone, the anterior three-fourths of the esophagus to below the thyroid and the thyroid gland itself in one block of tissue. The posterior one-fourth of the esophagus, being uninvolved in the malignant growth, was left to furnish a mucous covering to the cervical vertebrae, a result which was obtained. The patient had undergone four previous operations, including two laryngotomies and a laryngectomy, which were reported in the *Annals of Surgery*, 1904, vol. 39, p. 968. Convalescence was uninterrupted and the patient was up and about by the fourth day after the operation. At latest report, about three and a half months after the operation, the patient was able to do all sorts of farm work, and had gained in weight, being only three pounds under his normal figure of 150 pounds. The trachea was kept open by a constantly worn silver tube. He masticates his food and swallows it through a funnel-shaped rubber tube suspended above to the opening of the pharynx, the narrowed portion below entering an inch or two into the esophagus.

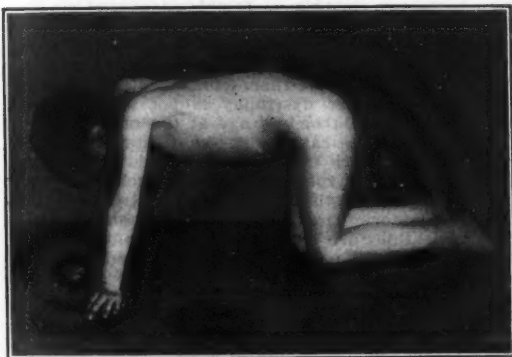
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Classify advertised remedies under four heads: Reputable, doubtful, semi-fake and fake. Therapeutically and ethically considered we should put into the first class only preparations whose constituents are known to the prescriber, and all others would and should be thus banished to the outer darkness of undoubted fakes.—Jackman in *Journal of Medicine and Science*.

A CASE OF PSEUDO-HYPERTROPHIC MUSCULAR DYSTROPHY.*

By LANGLEY PORTER, M. D., San Francisco.

D. M. Aged 7 years, 8 months, was brought to me 6 months ago on account of weakness in the legs, and bronchitis. The mother's account was that the child was apparently healthy at birth, weighed 7 pounds, was breast fed to 16 months, maintained good health during infancy, walked at 16 months, talked at 2½ years. During its first month of walking no weakness in the legs was noticed. The child was then sent away from home to board, in order that the mother might be free to work, but in 6 weeks was



brought back unable to walk, apparently in pain, as he cried incessantly.

After this the child walked very little till it was 4 years of age. The grandmother says that "if there was a match on the floor he would fall over it, and it was a job to get him up again," which is another way of putting Gower's aphorism, "these children fall with ease and rise with difficulty."

It was noticed now that the child kept up its habit of going up stairs on his hands and knees, and at last when the feet were used, he still brought his hands and arms into play for climbing; it was further noticed that his feet tended to be flat. He is subject to frequent severe attacks of bronchitis, and his digestion is easily disturbed; in either event his temperature rises readily, and delirium supervenes with ease; his intelligence is held by his family to be good; it hardly seems up to the 8-year standard, but we have to remember that the child has been babied, and has had no shock or antagonisms.

The family history shows nothing that seems to bear on the case. There is a sister in perfect health, another sister died at 7½ months with what seems to have been infantile atrophy, although it possibly may have been a case of the same type as the present, as the mother insists that the infant in its last months never moved arms or legs. The mother has one brother and two sisters in perfect health, the grandmother, one brother whose health was perfect, the health of the father's family it has not been possible to determine. So the usual history of a family disease seems lacking, and, what is unusual, there is a definite history of syphilis in the father. The boy entered my office with a duck-like waddle, highly suggestive of the progressive muscular dystrophy with which he is suffering. It only remained to strip him to see his big calves, and when he was put in dorsal decubitus to note the characteristic maneuvers brought into play to aid his rising, to make the diagnosis certain.

On looking at the boy it is obvious the calves are not equal in girth—left 9, right 8½. The left thigh is a full inch bigger than the right—11½ and 10½. The right buttock is bigger by an inch than the left, measured from coccyx to symphysis pubis—9 and 10. The

deltoids and triceps both big, give the same measurements on the two sides—6½ and 5½. The left chest measured just below scapula 10½ inches, a quarter of an inch greater than the right at the same point.

The elliptical posterior border of the enlarged calf muscles show fairly well; they diagnose the condition from the flatter physiological hypertrophy. These muscles are invariably hard in this disease, and most often are even more enlarged than in this boy. It is easy to demonstrate the weakness of the calves by making the patient attempt to tiptoe. You will notice the anterior tibial group is enlarged in this case, although it is more often found atrophied. The vastus externus commonly big, is not markedly so here, and we miss the abrupt bulging its hypertrophy produces just above the knee. The vastus internus seems big. The tensor fascia femoris is out of proportion to the other muscles of the thigh. The glutei also are very prominent, especially on the right side; the right rectus abdominalis is large, and the lumbar spinal muscles seem large and hypertrophied.

The infra spinatus is big, as it invariably is in this affection; the supra spinatus is also enlarged, although in some cases it may be normal or atrophied. The deltoid, triceps and the supinator longus are hypertrophied; the former two following the rule, and the latter, which is sometimes tiny, is more often as we find it here. The lower half of the pectoralis major is markedly wasted, but it is sometimes entirely absent, which is also true of the latissimus dorsi, which is here wasted. The biceps are in the usual condition of atrophy. The intrinsic hand muscles commonly escape attack, as they seem to have done here, although cases are reported in which these muscles enlarge, especially the abductor indicis. The face and neck usually escape, but the tongue is sometimes enlarged, and also the masseters. I believe that there is a definite but slight enlargement of the masseters in this case.

The muscles attacked, whether hypertrophied or atrophied, are weak, and as the same muscle groups are for the most part in all cases attacked, the



peculiarities of gait and movement following are fairly constant, and so become diagnostic.

The walk, as you see, is duck like; the knee advances before the foot, the leg is swung into extension by its own weight because of the weakness of the knee extensors. The waddle results because the weak flexors of the hip do not enable the foot to clear the ground, so muscles are brought into play that raise the pelvis. If the anterior tibial muscles are weak,

there is a tendency to toe-drag, and the waddling is exaggerated to meet the added difficulty the foot finds in clearing the ground. Great care is taken to plant the foot squarely and get the center of gravity directly over it, for fear the weak muscles will not respond to the demands of equilibrium, and balance be lost. The glutei ordinarily counteract the inclination of the body toward leg off the ground. The patient when he comes to a halt stands with a broad base; when erect, there is usually a marked lumbar lordosis, due to the weakness of the hip extensors, which allow the forward tilt of the pelvis that carries the lower lumbar spines with it, and the upper part of the trunk shifts far back to keep the center of gravity well over the feet. When the boy sits, the lordosis disappears and is replaced by an extensive backward curve, due to the weakness of the hip extensors and the spinal muscles.

This boy has some slight dorsal lateral curvature, which in most cases is more marked, and is due to a combination of muscular weakness with faulty posture.

When the patient rises from the floor one can see the extension of the hips is not extremely difficult, and his chief labor comes in getting the knees into extension; this he achieves by resting the main weight of the body on his hands with legs well behind him, carrying his body backwards with his hands on the floor, his knees extended, one hand is then transferred to the knee, and with the other on the floor he is enabled to get his hips into full extension. Were the extension of the hips more difficult, the patient would find it impossible to raise the body in the same way; both hands would be transferred from the floor to the knees, and the body brought into the erect position through shifting the hands higher and higher towards the hips in two or three efforts. The weight of the head is utilized in this method of rising to aid extension, acting on the body through the arms as a fulcrum; on picking up the patient, the shoulder girdle here rises with ease, due to the weakening of the latissimus dorsi, serratus and pectoralis major.

The knee jerk in this case is slight and difficult to obtain, though it is present, and will remain so as long as the vastus internus has any contractile fibres left. It is not now so marked as when I first saw the boy, and will progressively lessen; the electric reaction is present both to Faradism and galvanism in all the muscles, but in varying degree. Reaction of degeneration is of course not to be expected, but progressive weakening of response to both constant and interrupted currents will keep pace with the advancing degeneration of muscle.

The prognosis is bad. Shortening and contraction will come on in the hypertrophied calves. Talipes equinus will follow, walking become difficult, and finally impossible; the patient will then become bed ridden, extreme lordosis, and contraction of the flexors of the knee and elbow joints may follow. On taking to bed the muscular degeneration rapidly augments, and the patient soon becomes helpless, retaining practically no muscular power except in the hands; death usually supervenes from one of the pulmonary affections, which are grave in these cases, because of the weak respiratory muscles, which, however, never degenerate sufficiently to be a direct cause of death. The better care the patient receives, in the matter of food, fresh air and regulated exercise, the better chance there is for him to live beyond puberty; and if we can carry him past his 15th year, the progress of his disease will probably be slow. Such patients have been known to reach late middle life; unfortunately, however, very few attain their majority, the greater portion dying between 10 and 14 years. Our greatest efforts should be bent toward keeping the patient out of bed; tenotomizing the contracting calf muscles may often prevent the crippling of the patient; if necessary the operation may be repeated any number of times. Girls, when affected, are less severely afflicted than boys, and the course of the dis-

ease is slower. Late in the disease the bladder and rectum may become affected, probably from implication of the sphincters.

Gait, movement, manner of rising from floor, with large calves and big infra spinati, and with a rising shoulder girdle and wasting of the latissimus dorsi and lower part of the pectoralis major, seem pathognomonic. Congenital spastic paraplegia has been mistaken, the only points in common seem to be that both diseases affect children, and in both the muscles may be large, with weakness of legs and contraction of calf muscles; but it seems hardly likely that anyone could miss the exaggerated knee jerks and the spasticity of the legs in the paraplegic state, nor overlook the fact that there is no resemblance between the methods of progression or in the manner of rising from the floor in the two conditions. Double congenital hip dislocation gives to the patient a waddle not unlike pseudo-hypertrophy, but there ends the resemblance.

To catalogue some cases in which there is little hypertrophy and divide them from the other forms of idiopathic muscular dystrophy is not always easy. Stress may be laid on the age at the onset, on the enlargement of the calves, and the escape of the face muscles, especially the orbicularis oris and palpebrarum in pseudo-hypertrophy. Again such cases may have to be differentiated from spinal atrophies, diseases of anterior roots, and of peripheral nerves. The myopathies are characterized by gradual onset; affected groups of muscles corresponding to no spinal segment, root or nerve; absence of any fibrillary contraction, absence of R. D. and absence of alterations of sensation.

Excepting one case of Gower's where the intermediate substance of the last dorsal segment was found in granular disintegration, no alterations have been found in the nervous system of patients dead from muscular dystrophy. Anterior cornual cells have in every case been found intact. Intra muscular nerves have usually been found intact, but Babes and Ferner have both reported changes in the muscle end-plates. Muscle spindles are unaltered. Some observers report disintegration of the peripheral nerve axis cylinders just where they enter the muscles.

Babes described an endarteritis due to an accumulation of embryonal cells blocking the circulation, impairing the nourishment of the muscles, leading to their atrophy. The muscles themselves are pale and wasted; the hypertrophied ones in time waste to about normal size; in extreme cases there is not a trace of muscle fibre left. The microscope shows in the moderately affected muscles the muscle fibres diminished in size and number and irregular in shape, transverse striation disappearing, and the muscles becoming granular; fatty and waxy degeneration have also been noted. Muscle fibres removed during life have been found definitely larger than normal.

There is increased nucleated interstitial tissue and fat. Gower's idea is that the muscle degeneration is secondary to the overgrowth of connective tissue, but Erb holds, it seems to me more rationally, that the muscle fibre is primarily at fault. He thinks the process of degeneration begins with hypertrophy of single fibres and increase in their nuclei, which enlarge and subdivide, the new fibres going rapidly on to atrophy, which is followed by increased connective tissue formation and fat deposit. Sufficient fat determines pseudo-hypertrophy; where no fat is deposited, the fibrous tissue only replaces atrophied muscle fibres, and the muscles become hard and moderately small.

In a third group there is neither fibrosis nor fat deposits, but mere wasting of muscle fibre as instanced in the lower part of the pectoralis major and latissimus dorsi.

No satisfactory explanation seems to exist as to why the certain muscles affected are picked out. Babinski attempts to explain it by the relative time of fetal muscle development; he found in a 5-months' fetus, supinator longus, serratus magnus, latissimus

dorsi, rhomboideus, lower two-thirds of trapezius, orbicularis oris, quadriceps extensor, tibialis anticus, most advanced in development; the deltoid biceps, triceps, infra spinatus, subscapularis and crural somewhat less, the hand muscles very little advanced, and as the muscles catalogued are most often those, in order, attacked in progressive myopathies, it seems plausible to offer this explanation, although it is hardly convincing.

TRYPANOSOME AND ITS RELATION TO CERTAIN DISEASES.*

By HENRY du R. PHELAN, M. D., San Francisco.

AS a result of our present intercourse with tropical countries incidental to colonial expansion, bilharzia, uncinaria, filaria and a host of other parasites with euphonious names and evil designs are threatening us with an invasion. Already many of these unwelcome guests have made their appearance in this country, while others are perhaps on their way to our shores. I may, therefore, be permitted to offer a few remarks about a parasite, certain varieties of which have not yet been reported among us, but whose possible visit would prove a disaster to man and beast. I refer to the trypanosome.

These, as you all know, are flagellate infusoria, whose organs of locomotion are long contractile filaments. There are numerous varieties of trypanosomes differing slightly in their morphological aspect and to a greater degree in their pathogenic properties. In a general way a trypanosome may be described as a fusiform body, a transverse section of which presents the appearance of a razor blade terminating in an undulating membrane. Within the body there is a nucleus, and at its anterior extremity a corpuscle called the cariosome, which is the starting point of the flagellum. The flagellum follows the free border of the undulating membrane, which it re-enforces, and projects beyond it. The trypanosomes multiply both by the formation of ameboid bodies which segment and by the longitudinal or transverse division of the adult parasites.

The mode of transmission of the various trypanosomes is as yet undetermined, save in the case of the *Trypanosoma Nagana*, which is transmitted by the bite of the *Glossina Morsitans* and of the *Trypanosoma Gambiense Castellani*, which is transmitted by the *Glossina Palpalis* or tsetse fly. This fly appears to be a mere carrier of the parasite whose usual habitat is the blood and cerebro-spinal fluid of its victims.

The varieties of trypanosome so far known are the following: Trypanosome of birds, discovered by Weld, who found it in the blood and bone marrow of the owl, etc. Trypanosome of frogs, studied by Gruby, Mayer, etc., of which there are several varieties. Trypanosome of fish, discovered by Valentin. Trypanosome of the rat, or Lewisii, discovered by Gros and Chaussat and studied by Lewis. Trypanosome of the rabbit and guinea pig, observed by Joly and Nabias of Bordeaux. Trypanosome of Dourine, discovered by Rouget, at Constantine, in Algeria. Trypanosome of Surra, discovered by Griffith Evans and studied by Lewis, who identified it with the trypanosome of the rat, and by a number of Americans in recent times. This trypanosome is of special interest to us in view of the fact that it made an invasion in the Philippine Islands at the close of the period of active hostilities, and just before the advent of the epidemic of Asiatic cholera of 1902. While war and cholera decimated the native population in a frightful manner, the trypanosome of Surra killed off 90% of their horses and cattle, causing thereby additional distress to the already over-afflicted Filipinos.

The epidemic of Surra referred to, originating in India, did not limit its ravages to the Philippines alone, but, crossing the broad Indian ocean and the equator, it invaded the Island of Mauritius, where an

equal mortality of cattle signaled its arrival. The mode of transmission of the trypanosome of Surra has not been determined as yet. The *Glossina Morsitans*, the carrier of the *Trypanosoma Nagana*, being unknown in the Philippines and Mauritius.

Trypanosoma Nagana or *Brucei* is of equal importance with that of Surra, with which it is identified in many respects, though its mode of transmission is by a different channel. Its size averages 15 microns, and unlike the trypanosome of Surra, its movements are slow and wriggling, while those of the Surra trypanosome are rapid and straight. Both are fatal to cattle, and both have caused extensive ravages. While Surra has been reported in India, the Philippines and Mauritius, Nagana is found only in certain parts of equatorial Africa. Exceedingly virulent, the *Trypanosoma Nagana* readily destroys horses, donkeys and dogs, while certain indigenous animals, such as the zebra and the zebroid, a cross between a zebra and a horse, are immune to it. The mode of transmission of the *Trypanosoma Nagana* is through the Tsetse fly or *Glossina Morsitans*, which acts as a mere carrier, though recent investigations may show a metamorphosis of the parasite in the body of this fly.

The *Glossina Morsitans* is somewhat larger than an ordinary house fly, being $9\frac{1}{2}$ mm. long. It is yellowish in color, and is armed with a sting longer than its head. The thorax is of a reddish gray color, presenting four dark brown stripes. The abdomen is yellowish, and the border of each segment is of a dark brown color. This fly abounds in those regions where Nagana exists. The destruction of the breeding places of this pest and of the fly itself is the only efficacious measure so far known against the ravages of Nagana.

Trypanosoma El Massiani, found in South America, causing the Mal de Caderas. Its mode of transmission is still undetermined.

Trypanosoma Gambiense Castellani is of far more importance than those of Surra and Nagana, being the cause of sleeping sickness, the ravages of which are very extensive in tropical Africa. In 1903, I had the good fortune of meeting Castellani, upon his return from Africa, where he had been sent to study the sleeping sickness among the native tribes so affected. It has also been my good fortune to have listened to a lecture delivered by him on the object and results of his expedition which may be briefly condensed into the following words:

In November, 1902, Castellani found a trypanosome in the blood of a negro in Uganda, who was suffering from the sleeping sickness. In March, 1903, he discovered the parasite both in the blood and in the cerebro-spinal fluid. He then made a series of examinations of the cerebro-spinal fluid, and out of 34 cases examined, he found the trypanosome in 20. He infers that this parasite is the cause of sleeping sickness.

Bruce confirmed Castellani's discovery, and found the trypanosome in all of the 33 cases which he examined, and he also found the *Filaria Perstans* in certain cases of sleeping sickness. Some of the conclusions arrived at by Bruce are that neither natives nor Europeans are immune; that 100% of the victims of sleeping sickness die; that the lower animals are not a factor in the spread of the disease to man; that the carrier of the human trypanosome is the *Glossina Palpalis* or Tsetse fly alone; and that all stages of development of the trypanosome take place in the human body.

Christy, who also studied the sleeping sickness, found the trypanosome in the cerebro-spinal fluid of 104 patients. He concludes that in many cases of sleeping sickness the trypanosome is never found in the cerebro-spinal fluid, or only toward the end of the disease; that it is rare to find a large number in the cerebro-spinal fluid; that the parasite may come and go in the cerebro-spinal fluid and in the blood; that enormous numbers may be in the blood and none in the cerebro-spinal fluid.

* Read before the Medical Alumni Association of the University of California, July, 1905.

In this connection I may add that I have had the advantage of observing the march of the disease in three Congo negroes, who, after displaying the usual symptoms noted in such cases, quietly slept themselves to death. Brumpt, in Paris, experimenting on monkeys, succeeded in reproducing the disease in them. While interesting in that they demonstrate the relation between the trypanosome *Castellani* and sleeping sickness, these experiments have so far failed to lead to the discovery of any remedy for the disease.

THE PATHOLOGY AND TREATMENT OF MORPHINISM.*

By C. L. CASE, M. D., Oakland.

VERY little if any improvement in the treatment of the narcotic drug addictions has been made during the last half century until within the last few years. The treatment has been practically the same all these years, and has been equally unsuccessful and unchanging.

The teachings of Burkhart have to a great extent moulded professional opinion on this subject, and his gradual reduction method has had the endorsement of most medical writers. This has evidently been given upon theoretical grounds, and not because of success attending its application. This tapering off method appeals to the preconceived notions of both the physician and his patient, but as these notions were based upon a false conception of what was really to be accomplished, those holding them were doomed to disappointment. Treatment by this method has been almost universally a failure. The long siege of almost intolerable suffering which it involves so exhausts the patient, both physically and mentally, that by the time the drug is all withdrawn the patient has no ability to resist the slightest pain, and is so thoroughly exhausted and discouraged that he will return to the use of the drug at the first opportunity. Failure to cure patients of this class by this irrational method has led a large portion of the profession to regard these wretched sufferers as hopelessly incurable, or as wilfully abandoned to a loathsome habit which they continued merely because they preferred to do so.

Another method which has been advocated by the more radical members of the profession was that of Levinstein. In this, without previous preparatory treatment, the opiate was discontinued at once, and when the vital forces began to fall, an effort was made to support them with alcohol and other such stimulants, with a final resort to morphine if the symptoms became too alarming. Both death and dementia have been recorded as the result of this inhumane undertaking.

The third, and by far the best of the older methods, was the rapid reduction or "Quick mode" of Erlenmeyer. In this method the drug was reduced the first day to about one-third the usual quantity, and on each succeeding day the dosage was reduced until zero was reached by the fifth to the tenth day.

All of these modes of treatment were based upon the idea that the drug in the system was the first and principal thing to be contended with; in fact, that it was the sum total of the pathology. No treatment of any kind was given to prepare the patient for the withdrawal, none was thought to be necessary, but after the drug was withdrawn then the complications that arose were treated by various remedies, though in most instances these complications were so numerous and severe as to almost, if not completely, exhaust the patient, and often to force a resumption of the use of the drug. Among the more severe complications that occurred after the withdrawal of the drug by either of these methods may be enumerated, intestinal colic, nausea, vomiting, diarrhea, frequently assuming a dysenteric type and often proving uncontrollable without a return to opiates; rapid,

labored, inefficient or irregular heart action, collapse (sometimes proving fatal), extreme prostration, cold, clammy sweats accompanied by rigors, involuntary muscular contractions, cramps, hysteria of the most marked type, coryza, aching of the back, limbs and joints, extreme restlessness, persistent insomnia, general hyperesthesia of the peripheral nerves, burning sensations in the skin, especially in the back and feet; complete loss of appetite amounting in many instances to a loathing for food of all kinds, recurrence of the suffering for which the drug was originally used, maniacal delirium, sometimes proving to be permanent dementia.

It was often the case that some or many of these complications continued for weeks or even months, in spite of the most active treatment, only to yield when the physician was forced by their severity and exhausting character to resume the administration of opiates to save the life of the patient. All the old writers advised the symptomatic treatment of these complications as they arose, but made no effort to prevent their occurrence by ascertaining and removing their cause beforehand; in fact, they regarded them as entirely due to the withdrawal of the drug, and therefore unavoidable. With this formidable array of complications to meet, and with the gloomy prognosis given by the authorities, few physicians were willing to undertake the treatment of this class of patients. This left this unfortunate class of sufferers a most ready prey for a hoard of hungry nostrum vendors and charlatans.

Something over six years ago, Dr. George E. Pettey, now of Memphis, Tenn., having patients of this class in his clientele whom he was unable to cure by any form of the reduction method, and not being willing to allow them to drift into the hands of the irregulars, decided to make a thorough investigation of the treatment of the narcotic drug addictions. He says that after reading the available literature, he was convinced that the real pathology of this condition was not understood; that there was evidently another factor to be contended with besides the drug that was being used. In an effort to determine what this was, he says he laid aside all preconceived opinions and disregarded the teachings of the standard authorities and endeavored to forget for the time being that his patient was using a drug. In approaching the subject in this spirit, he found upon examination of the patient that there was marked evidence of the retention of excrementitious matter. The tongue was heavily coated, the breath foul, digestion deranged, bowels habitually constipated, etc. In studying the list of 21 or more principal complications that are recorded by the authorities as occurring upon the withdrawal of the opiate, he found that they could be divided into 4 principal classes, as follows: Those due to the derangement of the digestive tract; those due to derangement of the circulatory apparatus; those of nervous and mental origin, and those due to obscure causes, which he was then unable to determine.

In the first class, or those of intestinal origin, he placed these symptoms: Intestinal colic, nausea, vomiting, diarrhea and anorexia.

In the second class, or those due to derangements of the circulatory apparatus, he placed rapid, labored or inefficient heart action, extreme prostration, cold, clammy sweats and collapse.

In the third class, or those of nervous and mental origin, he placed hysteria, involuntary muscular contractions, cramps, general hyperesthesia of the peripheral nerves, burning sensations in the skin, recurrence of causal sufferings and delirium.

In the fourth class, or those of more obscure origin, he placed rigors, aching of the back and limbs, extreme restlessness, insomnia, coryza and a number of other symptoms which occasionally occur.

With this classification in mind, he set about trying to find some plan of treatment that would remove the cause of each of these classes of symptoms, and thus prevent their development, and to apply that

*Read before the Alameda County Medical Association.

remedy before withdrawal was begun, while the patient was still under the supporting influence of the drug he was accustomed to taking.

The first and most prominent indication seemed to be to empty the intestinal canal with the hope of avoiding the complications which had their origin in the derangement of that tract. Great difficulty was found in doing this as long as the opiate was continued. The strongest cathartics would not act with sufficient promptness to empty the bowel between the times for the doses of opiate and when a renewed quantity of the drug was taken, all activity of the bowel would be suspended. It was soon found that this was due to the suspension of peristalsis rather than to checking of secretion. In an effort to avoid this, strychnia was administered for the specific purpose of exciting peristalsis. Small doses made little impression because of the semi-paralyzed condition of the intestinal tube from the effects of the opiate, but as the doses of strychnia were increased, more active peristalsis was induced. By observing case after case and increasing the quantity of strychnia given with the cathartics, it was found that persons under the influence of opiates have a remarkable tolerance for strychnia, but that if 1-16 to 1-8 grain was given every 2 or 3 hours until at least 4 such doses were given, free peristalsis could be excited in spite of the benumbing influence of the opiate to which the patient was accustomed, and that, when peristalsis was thus kept freely excited, the purgatives in ordinary use acted as promptly and freely as they do on persons not under the influence of the opiates. This was the first, and has proven to be the most important step in the solution of this much-vexed problem. The quantity of excrementitious matter voided under such a plan was enormous and of the most offensive character, much of it showing signs of having been long retained. When the intestinal canal had been thus thoroughly emptied, it was found that the morphia could be withdrawn at once without the development of the symptoms classed as of intestinal origin; also that all other symptoms were very greatly modified, and that many of them were entirely absent. This was especially true of those due to derangement of the circulation. Neither collapse nor anything approaching to it was observed in any case after the intestinal canal had been fully emptied. In attempting to account for this, the conclusion was finally reached that these conditions were not due to weakened condition of the heart, as the older writers had thought, but to the obstructed state of the circulation, especially of the portal system, through which the heart was unable to throw the blood when deprived of the support it had been receiving from the opiate. But when this obstruction was removed, the heart had no longer to overcome that resistance, and was able to keep up the circulation without difficulty.

Having made this distinct advance toward the development of a rational treatment of these addictions by which the cause of the dangerous complications and those most difficult to control was removed, and their development prevented, and at the same time the suffering due to other annoying symptoms reduced more than 50%, the next step was to find a remedy that would overcome the symptoms of nervous and mental origin and those the origin of which was still undetermined. Various remedies were tried for this purpose, including bromides, chloral, cannabis indica, hyoscyne, hyoscyamus, duboisin, atropine, hydrotherapy, electricity, etc. Some benefit was derived from all of these in different cases, but hyoscyne proved the most useful, and, after becoming more familiar with its effects and mode of use, it was found to meet all the indications not met by thorough elimination.

After a period of clinical study of two years in which more than 150 cases were treated, Dr. Pettet announced the results of his investigations to the profession, with the following conclusions:

"Auto-toxemia is the essential pathology of mor-

phinism. When the system is freed from toxic matter and the portal system disengorged, morphine can be at once withdrawn without shock, collapse, heart failure, diarrhea or other dangerous symptoms, and the suffering incident to such withdrawal will subside within a few days' time without further treatment of any kind. This suffering, severe as it would otherwise be, can be avoided and these days passed in comfort by the discreet administration of hyoscyne.

"All desire for morphine, as well as the necessity for its use, is overcome by such a course of treatment.

"Strychnia is an essential ingredient of any purgative course intended to empty the intestinal canal of a drug user. Without its liberal administration, sufficiently free peristalsis cannot be excited to empty the intestinal canal while the system of the patient is benumbed by the effects of the opiate. The administration of strychnia should be confined to the period of elimination and given for the specific purpose of exciting peristalsis, but should not be administered after the withdrawal of the drug, as advised by the old writers, because, at that stage, it keeps up too free peristalsis and inclines the bowel to empty itself too often. This interferes with digestion and assimilation, and causes diarrhea by the passage of incompletely digested food through the bowel."

In regard to the prognosis, he says that instead of these complications being uncontrollable and the morphine addiction hopelessly incurable, this plan of treatment renders it the most certainly and readily curable of all the chronic ailments.

During the last year the writer has had opportunity to verify every claim made for this plan of treatment by its author, and wishes to put on record the following cases treated by his method:

Case 1.—L. B. S. Morphine addiction of 3 years' standing. Was acquired by having morphine given to him to sober him after sprees of whisky drinking. These sprees continued to occur with increasing frequency, and in the course of a year the drug was taken daily. The dose was increased until, at the time of coming for treatment, he was taking 16 grains at a dose twice a day, by the mouth, but had not drunk whisky for more than 2 years. Weight 150 pounds; height 5 feet 7 inches. Condition, fair for a drug user.

November 12, 1904—Began treatment by abstaining from dinner. 3 P. M., gave a capsule containing calomel $2\frac{1}{2}$ grains, powdered extract cascara $2\frac{1}{2}$ grains, powdered ipecac $\frac{1}{4}$ grain, strychnia nitrate 1-16 grain, and repeated same at 5, 7 and 9 P. M., and at 5 P. M. gave 15 grains morphine. 9:30 P. M., gave vapor bath and high enema of saline solution.

November 13th—7 A. M., gave 1-15 grain strychnia hypodermatically. 7:30 A. M., gave one bottle citrate magnesia, and used vibratory massage for bowels. 8 A. M., very large movement from bowels, containing much scybala. 8:30 A. M., another very free movement from bowels. 9 A. M., it is now time for the patient to take his usual morning dose of morphine, but he is quiet and comfortable, and nothing is given. 2 P. M., bowels have moved 5 times since 8:30 A. M., the last two actions were very bilious. Patient slept most of the morning, but now says he feels uncomfortable, and wants something to relieve him. 2:40 P. M., gave 1-200 grain hyoscyne hypodermatically. 3:40 P. M., gave 1-150 grain hyoscyne hypodermatically. 4 P. M., patient says he is not suffering, but feels sleepy. 10 P. M., patient has laid in bed quietly for the last 6 hours, was drowsy but not asleep; pulse 78, respiration 18, temperature normal. 10:10 P. M., gave 1-100 grain hyoscyne hypodermatically; about half hour later patient fell asleep and slept soundly for 6 hours; on waking said he was comfortable, drank water freely, and kidneys acted.

November 14th—8 A. M., patient has been awake for the last 3 hours; has sat up most of the time, but is now in bed; says he is not suffering any real pain, but is not altogether comfortable; gave 1-100 grain hyoscyne. 2 P. M., patient's condition for the last 6 hours has been entirely satisfactory; has slept several short naps; when awake he laid quietly in bed and said he was not suffering in any way. 3 P. M., gave capsule containing calomel 2 grains, sodium salicylate 4 grains, and strychnia nitrate 1-16 grain, and repeated same at 5, 7 and 9 P. M. 10 P. M., gave 10 grains veronal.

November 15th—7 A. M., patient slept from 11 P. M. till 5 A. M.; on waking bowels acted freely, and have acted three times since 5 A. M., but actions were not free. 7:30 A. M., gave one-half bottle citrate magnesia, also 1-20 grain strychnia, the latter hypodermatically. 11 A. M., bowels have acted 3 times since 8 A. M.; actions not large, but very bilious; patient says he is entirely comfortable, except he feels weak; has no desire for morphine, but would like to have something to make him feel stronger;

gave glass of hot milk. 8 P. M., no medicine of any kind has been given since 7:30 A. M.; patient has passed a comfortable day; has taken a glass of milk every two hours since 11 A. M.; says he has some pain in back and legs, not severe, but thinks it would be sufficient to keep him from sleeping; has had slight temperature this evening, is now 100.5°; pulse 85, respiration 20; gave 7 grains aspirin. 10 P. M., temperature has fallen to 99°; is more comfortable; gave 7 grains aspirin. 11 P. M., has been in a moderate perspiration for the last two hours; temperature now normal; no pain anywhere; sleepy.

November 16th—8 A. M., patient has slept most of the time since midnight; was awake several times, but soon fell asleep again; says he is not suffering at all, and has no desire for morphine, but wants a big breakfast; was given bowl of milk toast; no medicine. 9 P. M., patient has passed a comfortable day, without medicine; has taken nourishment regularly; bowels have acted once, and kidneys have acted several times freely; temperature has been a little above normal for the last four hours, is now 98.3-8°; gave neutral bath, and half hour later 5 grains aspirin.

November 17th—8 A. M., patient did not get to sleep until midnight, but slept most of the time from then till 6 A. M., when he got up, took bath and dressed for breakfast; says he feels entirely well, but weak; went to dining room with other patients for breakfast.

November 20th—Patient has spent the last four days in comfort, without medicine, except an aspirin capsule at bedtime; temperature has been from two-fifths to three-fifths of a degree above normal each evening, until to-day it is hardly one-fifth above normal; aspirin discontinued, and neutral bath alone given at bedtime.

November 30th—Patient has made rapid progress toward entire recovery during the last ten days; no medicine of any kind has been taken; has eaten heartily, slept from four to six hours each night; bowels have acted two to three times each 24 hours, but there has been no approach to diarrhea, and there has been no other unpleasant symptom; says he feels as well as he ever did, and wants to get back home to his family. Discharged.

June 4, 1905—Patient reports under this date that he is in excellent health, and has been hard at work since January 1st; has felt no desire for either morphine or whisky.

Case 2.—Dr. T. T. S., aged 48. Weight, 140. Height, 5 feet 10 inches. Morphine addiction of 5 years' standing; daily quantity used, 20 grains, taken hypodermatically at 3 doses. Use of drug began for relief of sciatica, which has entirely disappeared.

November 25, 1904—Took Turkish bath and usual dose of morphine; no dinner or supper; gave capsule containing 2½ grains calomel, 2½ grains powdered extract cascara, ¾ grain ipecac and 1-12 grain strychnia nitrate at 4, 6, 8 and 10 P. M., and at 8 P. M. gave 8 grains morphine hypodermatically; last dose.

November 26th—7 A. M., gave 1-15 grain strychnia hypodermatically. 7:30 A. M., gave one bottle citrate magnesia. 8 A. M., very copious and offensive action from bowels; it is now time for the morning dose of morphine, but patient says he is comfortable yet, and can go for a while longer without it. 12 noon, bowels have moved several times since 8 A. M.; two of the actions were quite copious, and the others were of a bilious character; no nausea or other distress accompanied or preceded the action of bowels; slept between movements of bowels. 2 P. M., patient says he is beginning to feel the need of his dose of morphine; is yawning and sneezing, but not in pain; pulse 70, full and strong; temperature normal. 2:10 P. M., gave 1-200 grain hyoscine hypodermatically. 2:30 P. M., gave 1-150 grain hyoscine hypodermatically. 3 P. M., patient fell asleep, and slept three hours; on waking says he is not suffering, but thinks a dose of morphine would make him feel better. 6:30 P. M., gave 1-150 grain hyoscine hypodermatically. 8:30 P. M., gave 1-150 grain hyoscine hypodermatically. 8:45 P. M., bowels acted freely, very bilious discharge; soon afterward patient fell asleep, and slept until 1 A. M.; on waking says he feels quite comfortable.

November 27th—1:30 A. M., gave 1-150 grain hyoscine hypodermatically. 3:30 A. M., gave 1-150 grain hyoscine hypodermatically. 8:30 A. M., patient was restless for about an hour after the last dose of hyoscine, had delusions of sight and hearing, but says he is not suffering. 10 A. M., gave 1-150 grain hyoscine hypodermatically; slept two hours. 2 P. M., gave 1-150 grain hyoscine hypodermatically. 9 P. M., for the last 8 hours patient has been quite comfortable, says he has no pain anywhere, has had several dozing spells, but has not been asleep soundly; pulse 60, full and soft; respiration 16; temperature normal; skin moist, but not sweating; no action from bowels during the last 24 hours, but kidneys have acted freely; gave capsule containing calomel 2½ grains, sodium salicylate 4 grains, and strychnia nitrate 1-16 grain at 3, 5, 7 and 9 P. M.; also 1-150 grain hyoscine at 9 P. M.

November 28th—7 A. M., patient passed a comfortable night; slept 4 or 5 hours; had 3 liquid stools between 2 and 6 A. M., which were of a bilious character, and very offensive; no nausea or other distress; says he feels weak, but is otherwise comfortable; is hungry; gave 1-20 grain strychnia. 7:30 A. M., gave half bottle citrate magnesia. 10 A. M., bowels have moved 3 times since 8 A. M.; the last 2 were free watery actions, colored with bile, but not very offensive in odor. 11 A. M., gave glass of hot milk, which was taken with relish. 6 P. M., patient has taken 4 glasses of milk since 11 A. M., all of which have been

retained; no nausea, colic or other unpleasant symptom; has had 2 small actions from bowels during the afternoon, but no tendency to diarrhea; has been begging for solid food, but that has not been allowed; no medicine indicated, and none given.

November 29th—8 A. M. It has now been 84 hours since the last dose of morphine was given, 35 hours since the last dose of hyoscine, and 24 hours since the last dose of any other medicine was given; patient has spent a very satisfactory night, slept 5 hours, says he feels weak, but is not suffering; his circulation and respiration are normal, temperature is 2-5° above normal; his tongue is now clean, his breath has lost its offensive odor, the bronze muddy appearance of the skin has disappeared, and he says he was never as hungry in his life, but does not want morphine; no medicine, but a more liberal diet.

November 30th—9 A. M., patient was up and about his room most of the day yesterday; was given soft boiled eggs, milk toast and all the milk he wanted to drink, but no medicine; was tired when night came; went to bed early and slept 5 or 6 hours; he says he feels well, and certainly seems very happy since he realizes his independence of drugs; says he has no desire for morphine or any other stimulant; was put on course of physical training and liberal diet.

December 10th—It is now 15 days since the patient began treatment, and the last 10 days have been spent in comfort without medicine of any kind. Has slept from 5 to 6 hours out of each 24, is eating heartily, and gaining flesh and strength at a rapid rate. Bowels act regularly; has had no diarrhea or other complication. Has kept up course of physical training faithfully. Was allowed to go to the country to visit relatives for a couple of weeks.

December 26th—Patient returned from the country to-day. The improvement in his appearance and condition is most marked. The stooped posture which he had acquired while taking morphine has given way to one of erect carriage. Now weighs 160 pounds, which is a gain of twenty pounds since beginning treatment 31 days ago. Has kept up physical training regularly, and this has converted the newly acquired flesh into muscle; says he feels strong enough to undertake anything that he ever did in his life, and is anxious to get back to his practice. Being a man of intelligence and superior training, he felt his slavery very keenly, and resorted to many expedients, home treatments, etc., to free himself from it, but without success. Now that he realizes he is a free man, and has another chance in life, he says he is going to take up its duties with renewed energy and determination, and try to make up for lost time. Discharged.

June 1, 1905.—A letter from Dr. S. of this date says: "I am as well as I ever was in my life, and am doing as hard work, with as much satisfaction. I continued to gain flesh after leaving you, until I weighed 180 pounds, which was 5 pounds more than I ever weighed before. I have had no occasion to take medicine of any kind since leaving you, and if I had I certainly would not have taken an opiate. In fact, I never think of morphine except as the most blighting curse on earth. I can hardly realize now that a little over six months ago I was almost as dependent on it as I was on the air I breathed. My whole experience with it seems as a horrible nightmare to me. No language can express my gratitude to those who released me from that abject slavery."

"I feel that I should not close without commending your course of physical training. It seemed unimportant to me at the beginning, but it was the very thing I needed. After being taken off of the drug, my tissues were flabby and relaxed, and I was weak in every way. The training course enabled me to acquire a fund of reserve physical force that has been worth everything to me. I am able to stand the strain of the heaviest day's work without feeling the need of stimulation. I believe that your course of physical training is the most effective means of preventing relapse in these cases that can be devised."

After the treatment of a series of 30 cases of drug addiction by this method I am convinced that results very closely approaching, if not equally as satisfactory as the above can be obtained in almost every case where the patient's condition is at all fit for treatment, and where the coöperation of the patient can be had. If a patient is subject to recurring attacks of hepatic or renal colic or other such painful ailment, it is useless to attempt to cure the addiction unless the plan also includes a radical surgical procedure or other means calculated to remove the cause of the pain. In such cases the most satisfactory results may be obtained by having the patient operated upon soon after the treatment for his addiction has been completed and before he is called upon to pass through the suffering of another attack of colic or other painful ailment to which he is subject.

As a rule, the community does not appreciate the value of services, whether medical or surgical, because it fails to realize in the least degree the burden of care placed on the physician and on the surgeon.

A CASE OF HYDRO-NEPHROSIS OF MOVABLE KIDNEY; HEMATURIA FROM TORSION OF PEDICLE; NE-PHRECTOMY; RECOVERY.*

By J. WILSON SHIELDS, M. D., and C. C. LEVISON, M. D., San Francisco.

J. B. Male; baker; 37; admitted to the City and County Hospital March 27, 1905. Family history unknown; denies venereal history; is not alcoholic.

Previous history: Twenty-five years ago was struck in the back, right side, by clod of earth; caused much pain and hematuria, which lasted a day. About a year later was thrown from a horse, this injury also causing hematuria for a day. About 20 years ago fell on a steel bar, striking right groin, and saw slight amount of blood intermixed with urine, which persisted for a day.

Six months before entering the hospital, had a severe fit of sneezing, lasting fully an hour, and says he felt something give way in his abdomen. A day or so later a swelling the size of a hen's egg appeared to right of and a little below umbilicus, and this swelling would disappear, with an increase in the amount of urine voided, to reappear at a later period somewhat increased in size. During all this time patient complained of dull, aching pain in the right lumbar region. Just previous to entering the hospital the tumor was noticeably enlarged, even to twice the size when first noticed.

On April 27th, early in the morning, while carrying a heavy tray of bread, stumbled and fell, striking right side over edge of barrel standing near. After about two hours, on account of pain, was compelled to quit work; tumor became larger; pain very severe. At this time he could not void urine, and at 4 P. M. was catheterized by Dr. J. Wilson Shields, and bloody urine withdrawn; pulse, 96; respiration, 20; temperature, 100° F.; leukocyte count, 15,000. The tumor was round and smooth, and extended 6 cm. above plane of umbilicus, and into pelvis 14 cm. to right of median line, and 4 cm. to left of median line; tumor moved with respiration. Peritonitis not present, which was evident by the free excursions of the diaphragm, and free abdominal breathing.

Palpation revealed a smooth, fluctuating tumor, exquisitely sensitive; colon could be palpated on upper surface of tumor, and could be moved up and down. The tumor was not to be palpated in the lumbar region, and a complete examination was not possible on account of pain.

Percussion: There was tympanitic sound elicited between tumor and liver, also to left of tumor; bladder was empty (had been catheterized); dullness above the symphysis. Auscultation of abdomen negative. No increase of peristaltic movements. On account of poor condition of patient it was concluded not to make bladder or ureteral examination.

Diagnosis: Most probable diagnosis in consideration of the history, hydro-nephrosis of movable kidney with torsion of the pedicle, which was the diagnosis made by Dr. J. Wilson Shields, but on account of the position of the tumor there was an element of doubt. Stomach, liver and gall-bladder disease could be eliminated with a fair degree of certainty. Pancreatic and mesenteric cysts could not be excluded, as the tumor was undoubtedly retro-peritoneal; echinococcus cyst had also to be considered. Ileus, invagination and volvulus of cecum could be excluded quite easily; rupture of the bladder, also mentioned, but excluded, as also aneurism, for there was neither pulsation nor bruit; tuberculous peritonitis, as well, was excluded.

As indications for operation were imperative, patient was prepared immediately for abdominal section. There was a tumor the size of a cocoon extending from right semilunar line to point midway between umbilicus and left semilunar line, being below a line drawn transversely through the umbilicus, the point of greatest prominence.

Incision was made over greatest prominence, and a quantity of serous fluid was evacuated from abdominal cavity as soon as peritoneum was opened. A lobular tumor presented which could only be delivered after the posterior parietal peritoneum was incised, as it lay in a retro-peritoneal recess. With the exception of the appendix vermiformis, which was adherent to its anterior surface, there were no adhesions. Only after considerable difficulty could the tumor be recognized as the kidney. In view of the fact that there was so little kidney tissue remaining, and the proximal portion of the ureter was contracted and twisted, it was determined to perform a nephrectomy after the left kidney was palpated. The retro-peritoneal recess was closed with a narrow gauze drain, and abdomen closed. Patient passed 900 cc. of urine in first 12 hours; uneventful convalescence.

Closure of Tracheotomy Wounds.

T. C. Hoover, Columbus, Ohio (*Journal A. M. A.*, June 3d), reports a case of low tracheotomy for removal of a foreign body that was treated by immediate closure with fine catgut throughout, beginning with the trachea. No drainage was used, and the healing was prompt and uneventful.

*Read before the San Francisco Polyclinic Gathering, May 6, 1905.

SOME REMARKS ON THE TREATMENT OF COMPOUND FRACTURES.*

By G. N. DRYSDALE, M. D., Eureka.

I HAVE chosen as a subject for this paper the treatment of compound fractures. I have done so because my location being in the center of the redwood lumbering industry, we probably have a larger number of such accidents than in most places with the same population. I don't propose to give you anything exhaustive on the subject or to offer anything new, but I would like to mention some points in the treatment which from my experience seem to me worthy of mention. I have, therefore, headed my paper, "Some Remarks on the Treatment of Compound Fractures."

It will be well before taking up the treatment of these accidents to mention some of the causes and the condition of the injured parts immediately after the injury. The causes of compound fracture are usually given as direct or indirect violence. Indirect violence usually means some twisting or displacement of the fragments following a fracture, which causes the ends of the fragment to puncture the overlying tissues, and need not be further mentioned. The direct causes are many and varied, such as blows from falling timber or limbs of trees, machinery accidents when a limb is caught and crushed in revolving machinery. A common cause in our locality is the slipping of the large cables used to haul the logs out of the woods. One end of the cable is attached to a stationary engine, and the other, perhaps half a mile away, to a large redwood log, which is towed along an improvised road. To guide the cable around turns in the road, it runs over pulleys. Frequently the cable slips while the load is being hauled, and if a man is unfortunate enough to be on the wrong side of the cable when it slips, he is generally a fit subject for a hospital or an undertaker when he is picked up. With a fracture caused in this manner we often have a combination of direct and indirect violence. A blow on the leg, for instance, will cause a fracture of the bones and laceration of the tissues on the side that was hit, and the force of the blow drives the fragments through the tissues on the other side.

As to the condition of the parts immediately after the accident we find all grades of severity of injury from the simple fracture with small punctured wound of overlying tissues, to severe contusion and laceration of the tissues with comminution of the fragments of bone. I would divide these injuries according to their severity into simple fractures of bone with small wound of overlying tissues, simple fractures of bone with extensive laceration and contusion of overlying tissues, multiple fractures of bones with severe laceration and contusion of overlying structures. Most of these accidents happen to men while working in the woods, mills or around machinery, and as a rule we find besides the injury to the tissues the wound is covered with dirt of all kinds from ordinary dust, bark and charcoal to grease from machinery; and oftentimes it is ground right into the tissues.

In treating these accidents much depends on the first dressing. This and the after treatment can be carried out better in a well-equipped hospital than any place else, and I think all cases should be moved to a hospital as soon as possible, if one is within easy reach. In the meantime a temporary dressing can be applied so that the patient can be moved without further injury. In many of the cases some temporary retentive apparatus is applied over the clothing by fellow workmen, and the patient sent at once to a hospital, so that we see our patient for the first time in the hospital.

It is almost needless to say that in preparing to dress these cases our preparation of operating room, ourselves and assistants should be thorough. Primary union of the wound in the soft tissues is the object

*Read at the Thirty-fifth Annual Meeting of the State Society, Riverside, April, 1905.

to be aimed at in all cases when it is possible, and even where it is not possible every source of infection that it is possible to remove should be removed.

We will pass over the preliminary preparation of the patient, taking it for granted that the preliminary examination of the injury has been made, dirty clothing removed and the patient prepared for the operating room, where the real dressing is to be done.

In most of the simpler cases those with a small punctured wound of the overlying tissues, it is sufficient to shave and cleanse the surrounding skin thoroughly, cauterize or incise the edges of the wound, seal or suture and then seal the wound with collodion, and treat the fracture as a simple one. In cases where the injury to the soft tissues is more severe, treatment, I think, should be more radical. Even if the opening in the skin be small, I think we should enlarge it, examine the wound thoroughly, remove blood clots, badly lacerated tissue and loose fragments of bone, arrest hemorrhage, cleanse the wound thoroughly with saline solution, wire the fragments if necessary, and close by suture with the idea of getting primary union. The question of drainage in these cases of medium severity is a question of judgment on the part of the operator. I think if the tissues are not too badly contused, and it is possible to bring them together so as to obliterate dead spaces, I prefer to close completely.

In the very severe cases, where there is much laceration and destruction of the tissues, with perhaps foreign particles ground into the flesh, our treatment is different, and these are the cases that I had in mind when I started this paper. In these cases primary union is out of the question, but with thoroughness in the first dressing and careful watching afterward most will heal kindly. Our first dressing should be thorough and radical. The wound should be opened freely so that all parts of the wound can be examined. Loose fragments of bone should be removed, badly lacerated and contused tissue trimmed off, and foreign matter removed by thorough washing. In doing this I prefer to have an esmarch applied so as to render the field of operation bloodless, and in this condition foreign particles are more easily recognized; then with a sterile hand brush and hot saline or Liquor Cresolis Compositus solution carefully but thoroughly scrub the tissues. Follow this with copious irrigation with saline solution, opening up all parts of the wound. With the wound cleansed, wire the bone fragments. The wiring may not be of any permanent benefit in these cases, but it steadies the fragments at least during the subsequent dressings. Then remove the esmarch and arrest hemorrhage. Some sutures may be applied loosely, but free drainage is an essential, either by leaving the wound open or by making free counter-openings so as to allow no pockets in which the secretions may collect. For a dressing I prefer moist dressings from the beginning, gauze wrung out of hot boracic acid solution or weak Liquor Cresolis Compositus and covered with rubber tissue, and over this plenty of absorbent cotton.

The after treatment of these cases is even more important than the first dressing. In spite of our best endeavors in some cases we will get infection, and this must be combatted by constant care as to drainage, hot compresses saturated with some antiseptic, and changed frequently. In some cases continuous irrigation with a similar antiseptic is necessary. In other cases the severity of the injury itself will cause sloughing and the separation of the dead tissue will require encouragement with moist dressings and the same careful dressings as in the infected cases. After the inflammatory process has subsided, healing, I think, takes place more kindly for some time with moist dressings than dry. At a later stage there will probably be some necrosis of bone that has been denuded of periosteum, and this requires attention. In this, however, I think we should be conservative. I have been surprised to see the small amount of bone lost in cases where a large amount

had been stripped of periosteum, and I think nature will tell us how much should be removed better than we can find out; and non-interference does not delay healing or union in most cases. Sequestra should, of course, be removed whenever found.

The question of retentive apparatus, while always important in fracture cases, is, I think in these severe cases of compound fracture, for a time at least, of secondary importance. Careful dressing, daily or oftener, is essential, and any splint that is used must be applied with this object in view. Later, when the external wound is healing kindly, the question of a suitable splint becomes of prime importance. In the beginning some apparatus should be applied that will support the limb firmly and comfortably, and that can be removed easily, oftentimes a pillow covered with a rubber sheet and pinned firmly around the limb with sand bags on either side will answer best. Later, when the necessity for a permanent splint arises, the same rules apply as in other fractures, excepting that we still have an open wound that requires dressing, and we must provide for this. As a rule plaster of Paris will be found the best material for a splint, either as a solid cast with windows cut over the wound or applied in strips so as to form well-fitting splints that can be removed.

Our results in some of these cases so far as the length of the limb, or sometimes the straightness of the limb, is concerned may be far from perfect; but if we succeed in getting bony union and a useful limb for our patient, even if it does not look well, we may have gotten an excellent result. As an example I would like to cite the following case:

M. G., age 27, while working in the redwoods, was struck with a cable that slipped in the manner I described at the beginning of this paper. He was standing with his full weight on his right leg, and the cable struck him on the outer side of the right leg just above the ankle. The result was a compound comminuted fracture of the right tibia and fibula about 3 inches above the ankle joint, with severe laceration and contusion of the soft tissues. A temporary splint was applied by some of the woodsmen over his clothes, and he was put on a train and sent to the hospital, where I saw him about 3 hours after the accident. Upon removing the clothing I found a fragment of the tibia about an inch and a half long and half an inch wide lying loose in the clothing; the fragments of the tibia were protruding through a large wound on the inner side of the leg, and another wound on the outer side exposed the fibula; circulation in the foot was good. The patient was cleaned up and removed to the operating room, where I dressed the wound after the manner I have described, opening the wound thoroughly, removing several pieces of loose bone, trimming away badly lacerated tissues, cleansing the wound thoroughly and wiring the fragments. I did not do much stitching, as I expected swelling and probably sloughing, and I wasn't disappointed. Ten days afterward the tibia was exposed to view through a hole that seemed to cover most of the inner side of the ankle, and another large one exposed the fibula, and it looked as if the foot might drop off. There was not much inflammation in the surrounding tissues, and the circulation of the foot remained good. After the sloughing tissues separated, the wounds began to granulate, and gradually filled in, but it was a slow process. At the end of 7 weeks the wounds had pretty well filled in, and it began to look encouraging, but there was no effort at union. At the end of the eleventh week the wound over the fibula had completely closed, and the other one almost so, and the leg felt firmer. During this time I kept the leg in a fracture box, removing it daily for dressing. I discarded the fracture box at this time and applied a plaster cast, which I cut on both sides the next day. This made a well-fitting cast that I could remove when necessary for dressing. At the end of 12 weeks I allowed the patient on crutches, and at the end of 4 months there was a complete bony union, and the patient began putting weight on his foot. During the fifth month two or three small pieces of bone were removed from the wound over the tibia, and at the end of the fifth month healing was complete and the patient walked without any assistance. There was some overlapping of the fragments and nearly two inches of shortening, but the patient now walks without a noticeable limp. Looking at the leg now, without any history of the case, one would consider it a bad result, but I look upon it as one of the best results I have had.

My ideas as to the treatment of these severe cases of compound fracture may be summed up as follows: Thorough and radical treatment at the first dressing, constant and careful attention to the little details of the dressings following, with lots of patience both on the part of the surgeon and the patient.

So far I have said nothing about amputation. I have left that to the last, as I think it should be the last thing thought of in these cases. Of course, we meet with some cases where the injury is such that amputation has to be done at once; but I think if there is a possible chance to save a limb for our patient we should try it.

Patent Medicines: A Good Suggestion.

ROGERSVILLE, Tenn., September 13, 1905.

To the Editor: Under separate cover I am to-day mailing you a marked copy of the *Rogersville Review*, a weekly newspaper published in this, a town of about 3000 inhabitants. I have had the editor copy your editorial¹ of September 2d on the patent medicine fraud as it prevails in the United States with special reference to peruna. These little weekly papers circulate among the rural people, where every issue is read through, ads and all alike. I would suggest that you induce every member of the American Medical Association to have this or some like article occasionally brought out in his home paper. Surely all the physicians of a town would have sufficient influence with their local paper to do this. I assure you that it would work wonders. The people at large have never heard anything but praise of these nostrums, and they fully believe that the ads are written and sanctioned by the medical profession.

This plan would doubtless not work in the larger cities where the advertising bills are large, but it could very easily be done with the small daily and weekly papers, published in villages and towns, as you will see. I propose to have some articles of the kind appear every week. The sums paid these small papers for carrying patent medicine ads is a mere pittance.

J. E. MILLER, M. D.

—*Journal A. M. A.*, September 23, 1905.

Thyroid Disease in California.

H. C. Moffitt, San Francisco (*Journal A. M. A.*, September 16th), writes interestingly on thyroid disease in California. Observation has convinced him that thyroid disease is more common in San Francisco than in many other cities, and he has studied the subject by correspondence with other physicians throughout the state. Goiter is more common, especially about San Francisco bay, and less frequent in the southern part of the state and in the mountains, and is endemic in certain portions of the northern section. Myxedema seems to be more frequent in San Francisco, perhaps because most patients drift there. He has reports of 53 cases in that city and 33 throughout the state, excluding *formes frustes*, of which he has notes of 11 cases. These are characterized by dry skin, scaling of the scalp, thinning of the eyebrows and loss of hair from the neck and in the axillae, pains in the knees and ankles and between the shoulders, and fat pads about the upper back and clavicle are characteristic. Of sporadic cretinism, he has collected 61 cases altogether, 35 of them in San Francisco. Exophthalmic goiter seems to be much more common in bay counties than elsewhere in the state, and he remarks on the danger of the use of the iodine preparations, especially when a goiter exists, however small. He has had several cases of iodism in patients with small goiters, and he suggests the possibility of the strong sea winds in San Francisco affecting the frequency of cases. The therapy of thyroid conditions is discussed at some length. The reports as to thyroid medication in myxedema and cretinism are enthusiastic; large doses are not required, and they may produce unpleasant symptoms in myxedema. He has seen good results in exophthalmic goiter from long-continued faradism. He thinks many cases of exophthalmic goiter are amenable to surgery, and that more attention should be given to the statement of Horsley that division of the isthmus alone leads to retrogressive changes and shrinking in the rest of the gland.

¹ "A Miserable Outrage," *The Journal*, Sept. 2, 1905, p. 722.

NEPHRO-PHONOTOSCOPE AND URETO-RENAL CALCULI.

By GEORGE L. EATON, M. D., San Francisco.

WITHIN the last decade many urological instruments have been invented for the purpose of determining disease of the genito-urinary tract. Prof. Nitze served the profession well when he produced the cystoscope, and with it we are able to determine with exactitude many pathological conditions of the kidney and bladder, and thereby avoid many exploratory operations. Still, at the present time urologists are handicapped in as much as so few instruments of practical value are at hand by which one is able to determine the true state of affairs.

Since the advent of kidney and renal catheterization, we are in a fair way of determining which kidney is at fault, and also the class of inflammation we have to contend with, as well as the functioning capacity. Dr. Winfield Ayres of New York has recently popularized kidney therapy by lavage of the renal pelvis to such an extent that his statistics go to show that a large percentage of kidney lesions are amenable to treatment and many pyelitic conditions are reported permanently cured.

Quoting directly from his article read before the American Urological Association in 1905, concerning the etiology of renal calculus: "Catarrhal pyelitis may exist for a long time and do no apparent harm; it, however, presents a beautiful field for the growth of a stone, and it is probable that all calculi have as their starting point a pyelitis—" It would be well at this point to consider the etiology of pyelitis. If it were possible to catalogue every pyelitic case in existence, in both male and female, I feel positive that at least 80% would give a history of gonorrhea, with one or more of the subsequent complications, e. g., cystitis, posterior urethritis, proctitis, vesiculitis, vasitis, epididymitis, metritis, endometritis, oöphoritis, salpingitis, etc. The other 20% would represent constitutional ailments with a predisposition toward nephritic complications.

Granting that pyelitis occupies an important role in the etiology of renal and ureteral calculi, we are now in a position to discuss the formation of the calculus, whether it be renal or ureteral; they must all have a nucleus for a starter. To begin with, we have an engorgement following an inflammatory process, which has a tendency to obstruct the lumen of the ureter nearest to the greater area involved, which would include the pelvic ureter. With this condition of affairs we should naturally expect a retardation in the flow of urine, thereby causing a gradual dilatation of the kidney pelvis and a resulting hydronephrosis with an accumulation of uric acid and oxalate of lime which, as you will readily see, may act as a nucleus and in a very short time produce a calculus.

Symptoms of renal and ureteral calculus are variable, in fact so much so that pain may be transferred to some distant part instead of being located in the organ affected. Bladders are frequently sounded, irrigated, and opened, ovaries and the appendix are removed, all to no purpose; as in one very striking instance in which the bladder was opened for stone, all symptoms pointing to the same, but upon subsequent examination and operation a renal calculus weighing 260 gr. was found.

A calculus may develop, and traverse the urinary passage, and escape without giving rise to any symptoms, while on the other hand the most excruciating pain with marked nervous symptoms and high fever will sometimes accompany one of much smaller size. Apart from an attack of renal colic, one of the most common symptoms is the pain referred to, the lumbar region, the front of the abdomen over the affected kidney and down the course of the ureter. Still all of the direct and reflex symptoms may be absent, and the only sign that attracts our attention may be the character of the urine, in which after being

examined micro- and macroscopically blood, pus and epithelia are found.

Diagnosis: Now what means have we at hand, outside of the symptoms above referred to, that will positively locate a renal or ureteral calculus? To be sure the X-ray has served us well and is a valuable adjunct in the determination of calculi and foreign bodies of the proper density, but we are liable to be deceived by it in so much as we have a highly concentrated solution of lime oxalate and uric acid, either one of which is capable of producing shadows resembling a concretion. This fact I think will explain many phantom calculi. Therefore it is necessary to resort in part to other means of determination. Recently, Dr. Howard Kelly of Baltimore devised a ureteral bougie with a wax tip; by the aid of a cystoscope the ureters are entered and as the bougie comes in contact with the calculus a slight indentation is made upon the wax, providing the calculus is large and firmly incarcerated so as to produce an impression, otherwise it promises nothing but failure.

I beg to present an instrument that I have recently devised for the purpose of determining and locating ureteral and renal calculi. The instrument consists of two important parts, i. e., a sensitive mica diaphragm which is adjusted to the ear of the operator by a pneumatic cushion and retained in place by a head band. The second part consists of a steel cable 30 inches long, terminating in an olive or probe point. With the exception of the terminus, the cable is firmly incased in a silk web sheath so as to protect the soft parts. Furthermore, the sheath



is marked in centimeters, reading from the terminus, the purpose of which is to determine the distance from the ureteral opening to the calculus. By the aid of this Nephro-phonoscope I am able to locate a renal or ureteral calculus without injury to adjacent structures. After locating the concretion it would be well to have an X-ray photograph made while the cable remained in the ureter, thereby showing very distinctly the cable as it comes in contact with the stone.

The following is my technic, and should be carefully followed. The patient should be placed upon hexamethylene-tetramine at least 24 hours previous to the examination. The bladder is thoroughly washed until the return is perfectly clear and free from filaments. Then about 250 cc. of sterilized water, with one-half of one per cent alcohol added, is introduced and retained in the bladder; the strictest antiseptic precautions are adhered to at all times. A Nitzsche cystoscope, after having been submerged in 1-500 solution of oxycyanide of mercury, is then introduced, both ureters are catheterized and the urine from each is submitted to an examination to determine which of the two is at fault. This procedure accomplished, the Nephro-phonoscope is then called into use. First, the diaphragm is at-

tached to the ear of the operator, the cable is then removed from the aseptic solution, and introduced through the ureteral carrier of the cystoscope. Great care should now be exercised, for fear of puncturing the bladder while attempting to enter the ureter that is to be examined. After entrance, the cable should be passed up the ureter very slowly while the operator keeps his ear trained for the peculiar grating sound, that is produced, and will be readily appreciated as the cable comes in contact with the calculus. It might be well to have an X-ray photo taken, with the cable in situs, as already suggested. One point I wish to emphasize is that after a calculus has once been located, the patient should not be subjected to any further clinical demonstrations, for there is danger of infection, but should immediately be operated upon and the concretion removed. I here report two illustrative cases, simply as demonstrating the efficiency of the instrument:

Case 1—Mr. M., age 48; occupation, miner in Mexico. Has never had any serious illness, but gives a history of contracting syphilis in 1892; was treated by mercurialunctions for more than a year. In 1899 patient contracted gonorrhea, which lasted until 1903, and since then patient has had more or less trouble with the following complication: Epididymitis on the right side, following a procto-cystitis.

Examination. Meatal secretion very scanty. Microscopically it contained pus and urethral epithelia, but no gonococci. The prostate gland and seminal vesicles were next examined, and the following condition found: The prostate somewhat enlarged, right vesicle very large and sensitive, the contents contained blood, pus and a few gonococci. The patient was then instructed to save his urine for 24 hours, which was examined, with the following results: Total quantity, 1500 cc.; total solids, 790 gr.; color, milky; reaction, acid; sp. gr., 1.124; albumen, 1-10%; sugar, absent; urea, 2%; casts, granular; crystals, oxalate of lime; epithelia from pelvis of kidney and uriniferous tubules; blood, absent; bacilli of no importance; pus, in great quantity.

Cystoscopic examination showed a slight inflammatory area surrounding the right ureteral mouth. Catheterization of both ureters and one ounce of urine collected from each. Left, normal with 2% urea. Right, albumen, 1-10%; urea, 2%; casts, granular; crystals, oxalate of lime; pus in great quantity.

The bladder was washed and the cystoscope reintroduced, carrying with it the cable of the Nephro-phonoscope, which was very easily introduced into the ureteral mouth of the affected kidney. After the pelvis was reached and a to-and-fro movement of the cable made, a very distinct grating sound was produced. **Diagnosis.** Calculus of the kidney pelvis with chronic pyelo-nephritis. An operation was advised, but patient declined and returned to Mexico; since then no word has been received.

Case 2—Mr. W., age 32; mother and father both dead. Mother was a victim of rheumatism. Father met death by accident. Patient has never had any sickness, except now and then a few muscular pains resembling rheumatism. In 1901, patient contracted gonorrhea, which gave him a great deal of inconvenience, especially upon urination.

Examination revealed the following: Quite a copious meatal discharge, which contained pus, epithelia and gonococci. Prostate gland enlarged and sensitive, the secretion from which contained pus but no gonococci. Urine, cloudy and full of filaments. The treatment consisted of irrigations to the anterior urethra of silbamine once daily, and the internal administration of hexamethylene-tetramine. Patient did very nicely for several days, when all at once he developed pain over the right lumbar region and front of the abdomen. Urine at this time contained a trace of blood. I submitted patient to cystoscopic examination, and the following condition was observed: From right ureteral opening, a faint trace of blood was noticed; otherwise, nothing of importance. Suspecting renal calculi, I introduced the cable of the Nephro-phonoscope and upon attaching the diaphragm I discovered a ureteral calculus about 20 cm. from the ureteral mouth. Directly after the removal of the cable the patient had an attack of renal colic; $\frac{1}{2}$ gr. of morphine was administered and he was removed to his room where he suffered the most excruciating pain for 36 hours; in the meantime everything was done to aid the passage of the calculus—morphine to relieve pain, hot sitz baths, frequent flushing of the bladder and the administering of large quantities of Napa soda, which I consider a first-class diuretic, when taken in large quantities. The concretion passed and immediate relief followed. Three days afterwards I introduced an air dilating cystoscope and removed a small calculus, composition of which was lime oxalite. Since then I have been washing out the pelvis and ureter three times a week with marked benefit to the patient.

The chief preparation of the surgeon, after the acquisition of the knowledge given him in his medical school courses, must be in direct contact with patients.

ANESTHESIA IN EAR, THROAT AND NOSE OPERATIONS.*

By WM. A. MARTIN, M. D., San Francisco.

THE relative safety of the various anesthetics used in the different operations on adenoids and tonsils is one almost impossible to arrive at. In the first place, all anesthetics are dangerous unless administered by a safe man; and furthermore, all anesthetics are dangerous unless pure and fresh.

Statistics are, in this as in other matters pertaining to surgery, illusory. In the first place, we only have a record of the fact that a death occurred during or following the administration of chloroform, gas or ether, as the case may be; no mention is made of the experience of the administrator nor of the purity of the anesthetic employed. The exact condition of the patient is unknown, a very important factor; and finally, but few of the many deaths are reported, as the notoriety is not desirable, especially if there has not been particular attention paid to all safeguards. Statistics as regards the relative safety of chloroform and ether in general, submitted by the anesthetics committee of the British Medical Association, 1900, comprising a minute and careful study of 25,920 cases from reliable sources, show that death occurred from chloroform and chloroform mixtures in 88 cases, a danger rate of .584%; under ether mixtures (gas, A. C. E. and chloroform), .085.

I wish to quote only a few paragraphs from conclusions of the report, some points of which are not generally known, viz.:

"Chloroform is about twice as dangerous in males as in females."

"Chloroform is most dangerous in early infancy and after 30 years; least so between 10 and 30 years."

"In conditions of good health it is very much more dangerous than other anesthetics."

"When danger occurs under chloroform, whatever its exact nature may be, there is abundant evidence that in a large proportion of cases the symptoms that are observed are those of primary circulatory failure."

"Imperfect anesthesia is the cause of a large number of cases of danger under chloroform."

"Vomiting under anesthesia, which may lead to danger, seems to be more frequent under chloroform than under other anesthetics."

"While vomiting is more common after administrations of ether, severe and prolonged vomiting is more common when chloroform has been used."

"Ether, when employed throughout or preceded by nitrous oxide gas or A. C. E. mixture, is singularly free from danger in healthy individuals."

"After-vomiting is more frequent with ether, but it is usually transient."

"Gas with ether, as well as ether, dangers are more common in females, although complications are more frequent in males."

"From the evidence before the sub-committee they are convinced that by far the most important factor in the safe administration of anesthetics is the experience which has been acquired by the administrator. In many cases the anesthetization completely transcends the operation in gravity and importance, and to insure success, particularly in these cases, it is absolutely essential that an anesthetist of large experience should conduct the administration."

The foregoing is taken from the "Reference Handbook of the Medical Sciences," appended to an article by Thomas L. Bennett, whom I also freely quote, and to whom I refer those who wish to go more intimately into the subject of ether, chloroform and nitrous oxide gas.

There is no mention made in the report of other anesthetics, such as bromide of ethyl, chloride of ethyl and methylchloride, and various combinations which in later years have been much used in shorter operations, particularly for the removal of adenoids.

These preparations have been much resorted to, especially in France.

In the discussion of the choice of an anesthetic, by the London Society of Anesthetists, in January, 1898, opinions varied, but the majority agreed that the safety depended greatly on the experience of the anesthetist. The one whose opinion interests us most, "Felix Semon, said that in chronic stenosis of the upper air passages chloroform is the preferable anesthetic, as ether increases the dyspnea and the liability to pulmonary complications. In operations for adenoids, chloroform, if well administered, is the best anesthetic. It allows a careful and not too hurried performance of the operation. Some of the fatalities which have occurred in these cases have been due to lack of manipulative skill on the part of the operators."

"Malherbe reports 3,024 anesthetics with ethyl chloride without mention of mishap, and claims it is an ideal anesthetic for short operations."

"Lermoyez uses ethyl bromide, apparently with equal satisfaction, making claim that if properly administered it is safe."

The latest to be reported from France is somnoform, consisting of 60 parts ethylchloride, 35 parts methyl chloride and 5 parts ethylbromide, used particularly in the practice of dentistry for extraction. It gives from 2 to 3 minutes of unconsciousness.

I have seen no reports of its use in the removal of adenoids; it is said to be safe (the makers claim over 40,000 administrations without accident), and is being used freely by dentists. I have had it administered a couple of times, once for a myringotomy and once for the removal of adenoids. In the first case, it worked admirably, but in the second, there was considerable cyanosis and resistance, which I attributed to the rapid administration and excessive quantity. It gives a longer interval than gas, and allows ample time for a quick removal of tonsils and adenoids.

Nitrous oxide will give only time to remove the adenoid or the tonsils, but for the combined operation it rarely lasts out, although I have succeeded in removing all before patient recovered sufficiently to experience pain.

"R. C. Myles makes mention of a death following its use in a man of 35 operated upon for adenoids."

Spinal anesthesia, and rectal anesthesia produced with ether vapor, and other unusual methods, I pass over, as they probably will not be of any special use to those confining their work to the head and upper air passages.

The adenoid operation is of relatively recent development, and the use of an anesthetic has been confined principally to this country and England. My first experience with this operation was abroad, and there the child was firmly held, and the operator did the rest. I was inclined to continue this method after my return, but soon found the American child was quite differently constructed; or probably, to put it better, I was able to follow the child through convalescence. Some children can be operated upon and seem almost insensible to pain, and do not suffer any after nervous disturbance, while others experience severe nervous shock, and are thrown into a naroxysm of fear every time the operator appears before them. For this reason I soon commenced the use of anesthetics. For years I have used chloroform in the majority of instances, and to date have met with but one case which caused me any concern. My assistant is cautious, one of considerable experience, and if he is not willing to undertake the administration of chloroform, I desist. In the case above mentioned, the child had partaken of its usual breakfast, the breathing was unsatisfactory at the start, and the radial pulse was soon indistinguishable. My assistant promptly took the boy by the heels and shook him, and he slowly revived. We undertook the operation a few weeks later, forbidding any breakfast; the same phenomena commenced at the outset,

* Read before the San Francisco Society of Eye, Ear, Nose and Throat Surgeons.

and the anesthetist refused to proceed. I introduced my instrument in the vault of the pharynx and found no adenoids. The obstruction proved to be entirely in the nasal passages.

I had one experience as a student in Heidelberg that is always before me when I have occasion to use chloroform. I was controlling the pulse of a child 14 years of age who was to undergo an operation for tuberculous disease of one of the tarsal bones. The pulse, which was regular and even, gave one accentuated beat and stopped forever. All appliances were at hand, battery, hypodermic of strychnine and artificial respiration were tried and continued for half an hour or more but without avail. It is that positive feeling of your inability to resuscitate when once the heart has failed that makes it so appalling. Ether gives a warning or gives one a chance to attribute the death to some other cause, and thus lightens the burden on one's conscience.

Statistics seem to prove that chloroform is relatively more dangerous in those of lymphatic disposition. Most of these statistics have not taken into account the operation for adenoids especially, and I do not accept the conclusion that children as a class operated on for this trouble are necessarily of a lymphatic disposition. Adenoids in the vault of the pharynx are undoubtedly normal. They are abnormal only when they are large enough to interfere with proper respiration. The enlargement of the cervical glands is the result of infection from the tonsils, either faucial or pharyngeal, and does not occur if early attention is given to the obstructing growths.

On the other hand, strumous, tubercular children and those of syphilitic parentage have enlarged adenoids and tonsils in conjunction with the other glandular affections, and these children should be placed in a class by themselves. Children of this type are always a source of anxiety to me when undergoing anesthesia in any form.

It is a lately discovered fact that operations in the territory of the fifth nerve through some reflex source cause a cardiac inhibition. It has been noticed in dentistry and in frontal sinus operation, and operation on the ear in those regions supplied by the trigeminus. It has been claimed that the application of cocaine to the nostrils will render the use of chloroform more safe, and inhalation of 'menthol' vapor has also been suggested as a measure of precaution. I formerly attributed this phenomenon to the fact that the nostrils were rendered more patent and respiration made easier, but since being conversant with the inhibitory phenomena just mentioned I think that the allaying of the reflex may be responsible for making the operations in this neighborhood more safe.

Undoubtedly chloroform has been used for the adenoid operation in children in a far greater percentage than any other anesthetic. It still seems to be the favorite of most operators, on account of its convenience, quick recovery, less annoying after-effects and of the prevalent opinion that, in spite of the statistical records to the contrary, if properly used it is not more dangerous in children than other anesthetics of equal efficiency.

Deaths are known to follow its use more frequently than reported, so I may say that statistics are of no value. Statistics are made up of reports from public clinics and hospitals where such events are of official record, those occurring in private practice (and there is no operation done more frequently than the removal of adenoids and tonsils in private practice) are seldom reported, and if they do obtain place in statistics they are generally valueless, as the conditions related are shaped to vindicate all concerned. We all know that children operated upon in clinics and public hospitals are in much less favorable physical condition than those operated upon in private practice, although it may be contended that conditions of operation are more favorable. I grant

you that such should be the case, but am convinced of the fact that these conditions do not hold.

Hinkel, *New York Medical Journal*, October, 29, 1898, reports the sudden death of a 6-year-old boy after the removal of adenoids. About one ounce of chloroform had been inhaled. He tabulates 17 deaths reported since 1892, while he could only find one death from ether and none from nitrous oxide and ethyl bromide.

Halsted, in a paper read before the American Laryngological, Rhinological and Otolological Society, January 1, 1900, speaks of 3 fatal cases besides the one he reports; while in England, 14 cases were recorded in the previous 5 years.

For operations of short duration I believe that chloroform will continue in favor with the majority of operators until more convincing arguments are brought to bear against its use, than have been up to date.

With the advent of tonsillectomy and adenectomy, which requires anywhere from one-half to two hours or more, the dangers of prolonged anesthesia will come more into account, and undoubtedly ether will be the anesthetic employed.

Of local anesthesia, cocaine and less potent analgesics I have not spoken. They do not relieve the pain in the first place, and in the second place they are probably more dangerous than the volatile anesthetics.

Sanford, Mayo Collier and Cline make mention of deaths from convulsions 3 to 4 hours after the use of cocaine, and I have seen records of other deaths not alone in this but in other operations of minor import, which have served to banish it from my practice in children.

R. Lehman speaks of what he calls the danger signal in chloroform. He says that if a patient keeps his eyes wide open or partially open during the narcosis, and opens them again whenever the surgeon closes them, some difficulty, either slight or serious, may be expected. This phenomenon was noted 21 times in 329 cases, and in each case there was either excessive vomiting, cessation of respiration, asphyxia, syncope or prolonged excitement.

In closing, then, I shall state my own position as to the use of anesthetics.

First, I prefer chloroform. I have used it without serious mishap in the great majority of operations for removal of faucial and pharyngeal tonsils and in operations which I perform about the head requiring anesthesia of not too long period. I employ a physician whom I know to be careful, a man of experience and good judgment, and follow his advice in all matters pertaining to anesthesia.

Children who have an adenoid alone, or the same with free tonsils, I often operate upon under gas, and will probably resort to somnoform in the future, unless some unfavorable reports shall deter me.

In children of so-called lymphatic temperament or dyscrasia I remove the adenoid under gas and await the improvement that is sure to follow for further operative interference, if I cannot succeed in getting the tonsils by the same procedure.

For prolonged anesthesia, say anything beyond a quarter of an hour, I favor gas followed by ether, and since seeing the easy recovery which has followed the few cases in which I have seen the tube introduced and the stomach washed, I shall be more inclined to adopt this mode of procedure; as the untoward after-effects that have followed many of my operations in the shape of fever, etc., I have attributed to the patient's inability to digest his own blood swallowed during or after operation.

To conclude, I would advise, firstly, to use only a fresh package of whatever anesthetic is employed, and secondly, to employ an experienced anesthetist and free yourself as much as possible from any anxiety relating to the dangers attending anesthesia, as no operator can do good work if he is unable to

devote his entire attention to the operation before him.

1. American Year Book of Surgery, 1900, page 38.
2. Year Book of Nose, Throat and Ear, 1901, page 225.
3. Ibid. page 225.
4. Ibid. 224.
5. Fetterolf, *Knapp's Archiv. Otolaryngology*, April, 1905, page 162.
6. Practical Medicine Series of Year Books, June, 1902, page 92.
7. Amer. Year Book of Surgery, page 491.
8. *Phila. Med. Journal*, Nov. 3, 1900.
9. *Jour. of Laryngology*, Aug. 1894.
10. Year Book of Nose, Throat and Ear, 1901, page 80.
11. American Year Book of Surgery, 1900, page 40.

WHEN TO OPERATE UPON UTERINE FIBROMYOMATA: MYOMECTOMY.*

By ROSE TALBOTT BULLARD, M. D., Los Angeles.

Great interest has been shown by the profession in the last few years in the question of the treatment of uterine fibromyomata. The view that women having fibroids are exposed to but little risk by their presence, and that these dangers will disappear at the menopause, has few advocates. Studies tabulating the degenerations and complications which may be expected have taken the subject from a theoretical to a practical ground, where the facts must be faced.

One thousand two hundred and seventy-eight cases from the tables of Martin, Cullingworth, Noble, Scharlieb, Frederick, McDonald and Webster show 31% of degenerations, comprising fatty, calcareous, cystic and myxomatous degenerations, necrosis, suppuration, sarcoma, carcinoma, etc. One thousand and seventy-three cases from the tables of those above mentioned, with the exception of Martin, give 45% of pelvic complications, the majority of which are pathologic changes in the tubes and ovaries. It is recognized that the risk of radical operation in uncomplicated cases is small, 1% or 2%, but that it rises to 10%, 20% or even 30% in the gravely complicated cases. It is evident, then, that delay, with its resulting degenerations and inflammations, is responsible for the high mortality. Besides these local dangers, there are the risks of the cardio-vascular and renal changes, the effects on the nervous system and the grave anemia, which is not easily cured even after the cause is removed. Sterility is a frequent accompaniment, but should pregnancy occur the patient is exposed to risk at every stage.

It is unnecessary to dwell on the symptoms with which all are familiar, but a few opinions from recent medical literature will give the present trend of thought. Dr. C. P. Noble, who has been foremost in advocating surgical interference in all cases, says that "fibroids should be treated from the standpoint of their life history, and not because of symptoms, for it is a fair conclusion that death will result without operation in one-third of the cases, in more than one-fourth there will be chronic invalidism, and of the remainder, about one-third, but few have not been incommoded."

Dr. C. C. Frederick. The possibility of leaving behind a wrecked body after operation, when the patient has previously been an invalid for years, must not be lost sight of. With the exception of small, hard, sub-peritoneal nodules, I believe most fibroids give rise to symptoms, and should be operated upon.

Dr. J. H. Carstens always tells a woman that the tumor must be removed or she will never be well.

Dr. R. B. Hall says that just as soon as a patient begins to suffer at other times than her menstrual periods, an operation should not only be advised, but urged, for there is usually something wrong in the tumor itself or the viscera adjacent that will in the end necessitate operation under unfavorable conditions. Just as long as the profession advises these patients to carry their tumors as long as their condition can be made tolerable, we will witness patients coming to operation after cancer is so far advanced that an operation affords only a temporary respite.

Dr. E. H. Grandin says any fibroid may become malignant or strangulated, and is likely to do so after the menopause—therefore advise operation, irrespective of symptoms.

Dr. H. N. Vineberg. The general profession should have it more forcibly brought to mind that they cannot promise a cure because the menopause is approaching; often, instead of atrophy and disappearance, the opposite may obtain, and finally operation is necessary after having lived through several years of invalidism.

Dr. T. B. Eastman. In the writer's 43 complicated cases, as well as in those of other writers, it is a significant fact that those complications inherent in the tumor, and which presaged the most certainly fatal results, were of such a character as to preclude positive knowledge, or often even a suspicion of their existence prior to operation, or even a microscopic examination. The general practitioner should at least send the patient to a specialist for an opinion. I would myself operate in every case if the patient would consent.

Dr. Howard Kelly thought it would be unfortunate for the impression to go out that because a patient had a fibroid it was an indication *per se* for operation, as hundreds of women with small fibroids had little or no trouble from them.

Dr. B. C. Hirst thought the conscientious surgeon probably operated upon not more than 20% of his patients. Bleeding, impaction and steady growth indicate operation.

Dr. Edward Reynolds says the possibility of strangulation of fibroids during puerperal involution should be made an element in weighing the question of the removal of fibroids by myomectomy in young married women.

Dr. A. Palmer Dudley believes that more women lose their lives from sepsis due to abortion, complicated by fibroids, than from any other condition due to fibroids.

The presence of a fibroid even of small size, acting as a chronic irritant and thereby predisposing to cancer of the body of the uterus, has been emphasized by Cullen, Noble, Hall and Goffe; the latter has recently referred to the fact as a "convincing argument in favor of removing all fibroids of whatever size or location, except in extreme old age."

It will be seen that opinions vary; few take the extreme ground of operating in every case, but the sentiment is towards operation in all cases in which symptoms occur and on all large tumors, because the risk to the patient from operation is less than that from the tumors themselves. The dangers attending the degenerations and complications associated with fibroids have been forcibly impressed upon me by the last four hysterectomies for fibroids in which I have assisted Dr. Lasher.

1. The removal of the tumor was complicated by a large ovarian hematoma with extensive adhesions. This ruptured during operation, but it did not give rise to sepsis, as in the cases reported by Dr. R. B. Hall; however, it greatly prolonged the operation and increased the risk of the patient.

2. The patient had had a fibroid tumor 7 or 8 years, but was in good health until one and a half years ago, when pain, accompanied by fever, developed in the lower part of the abdomen, and she began to lose weight. At operation the abdominal peritoneum was found adherent over the anterior surface of the tumor, and milary tubercles were spread over the uterus, tubes, ovaries and part of the small intestines. The tubercular peritonitis was limited to the pelvis and lower abdomen, and Dr. Lasher thinks the irritation of the growing tumor may have been the exciting cause, as the tubercular process was most pronounced on its anterior surface. She left the hospital in 4 weeks, but had an abdominal fistula and a slight afternoon temperature. Her ultimate recovery is doubtful.

3. This patient had been told by her physician that she had a tumor 10 years ago. There had been menorrhagia, which became more severe the last 6 months, and she lost 15 pounds in weight. On making a supra-vaginal amputation a cancer of the body of the uterus was found which extended two-thirds of the way through the uterus. The cervix was also removed, and the patient recovered, but it is probable that she will die from further development of the cancer.

*Read at the Thirty-fifth Annual Meeting of the State Society, Riverside, April, 1905.

4. There was here an old abscess and degeneration of the left ovary, the walls of which were so friable and pulpy that they could not be completely removed nor the tissues sewed over to control all bleeding, so that it was necessary to place a Mikulicz drain. Her recovery was uncomplicated, although prolonged by the drainage.

Another patient operated upon about a year ago had had a tumor several years, with menorrhagia. She began to have an offensive discharge, and here also was found a cancer of the body of the uterus. A pan-hysterectomy was done, but the patient died on the third day from a pulmonary embolus; diagnosis confirmed by postmortem examination.

These cases all emphasize strongly the dangers of delay. "It would seem more logical to operate early, thus preventing a profound degree of anemia, saving the patient months and years of invalidism, lessening the risks of the operation, and very greatly shortening the period of convalescence afterwards." Early operation also affords better opportunity for conservatism. Kelly says no more important advance can be made by the gynecologist than by extending the indications for myomectomy. A study of specimens removed by hysterectomy not infrequently shows that the tumor might have been removed, leaving the uterus in a normal condition. The importance of the menstrual function and the influence of the ovaries in young women should not be ignored. Many women still suffer after operation, although in other ways, often as severely as from the original malady. Any procedure which will conserve the sexual organs and their functions demands our careful consideration.

The operation of myomectomy has been long recognized as suitable to the majority of sub-peritoneal and sub-mucous fibroids; its application to interstitial growths has also been clearly demonstrated, but the brilliant results following a supra-vaginal amputation or pan-hysterectomy have overshadowed the more conservative operation, and it has not received the attention it deserves. In every patient under 35 years of age, the tumor and its relation to the uterus should be carefully studied to determine whether a myomectomy may be done provided there is not an extreme anemia, ovarian or dermoid cysts, inflammation of the tubes and ovaries, or grave disease of other abdominal or thoracic viscera. The early advocates of the procedure limited it to cases with few growths, and especially directed not to open the uterine cavity, but the investigations of Menge and Krönig have demonstrated that it is free from germs. Cullen says where the tubes and ovaries are normal we may open the uterine cavity, but cautions against doing a myomectomy if the appendages are adherent. He operated upon such a case, there being no evidence of any recent infection; artificial extremities for both tubes were made, and a myoma was removed from the posterior uterine wall, but sepsis shortly developed, and the patient died; hence, the warning. The number of growths need not necessarily prove an obstacle; E. E. Montgomery has removed 20 tumors from a uterus, with perfect recovery. Dr. Carmalt has recently reported the removal of a very large fibroid from the anterior wall of the uterus, where the bleeding was so excessive that more than 50 sutures were necessary in the peritoneum around the base of the tumor before the peritoneum could be incised for its enucleation. The patient had refused absolutely to consider hysterectomy. One year later she was delivered of a 10-pound boy. Cases of pregnancy following myomectomy have been reported by Kelly, Noble, Schauta, Olshausen and others.

I would not underestimate the gravity of the operation. The English consider it a very dangerous one, and think none but the most expert should attempt it. Kelly says the indifferent operator whose technique is slipshod will inevitably lose many patients from hemorrhage and sepsis. Montgomery says a stormy convalescence may be expected, because in the enucleation of a number of single growths there is a large amount of tissue of low vitality which is readily infected, and an accumulation of blood in dead spaces from which the patient runs an increased

danger. McCosh says for 4 or 5 days after operation the patient's temperature is apt to be about one degree higher than after hysterectomy.

It is true also that where there are multiple fibromata one cannot give the same absolute assurance of cure that one can after a hysterectomy; yet this possibility after a careful search is rather remote, and should not discourage resort to myomectomy where the other conditions are favorable, for these reasons:

1. It removes the disease without the uterus.
2. It avoids menstrual disturbance and an artificial menopause.
3. It allows conception.
4. It does not cause the mental distress which accompanies removal of the uterus.

The last mentioned reason was the determining factor in the choice of operation in the following case:

Miss M. L., a dressmaker, aged 35, consulted Dr. H. G. Brainerd because of an intense pain in the head, fearing that there was some disease of the brain. On account of the history of menorrhagia, he referred her to me January 29, 1904. History and condition: First menstruated at age of 16, always freely. For 4 years the flow has been increasing. There are cramps and a feeling of weakness at the beginning. The flow now appears every 21 days, and is excessive for 8 days. She is anemic, nervous and depressed. Hemoglobin under 50%. Local examination, made with difficulty, revealed a uterus about twice the normal size. A curettement was done February 10th. Few scrapings were obtained, but the suspicion as to presence of fibroids was confirmed, and our efforts were now directed towards building the patient up by rest, forced feeding and tonics, controlling the menstruation slightly by cotarnine hydrochlorat and ergot. By May 1st the hemoglobin had reached 60%, and she was feeling much better. A radical operation was now urged, and a reluctant consent was obtained with the condition that the uterus was to be left if possible.

May 14th, with the assistance of Drs. G. W. Lasher, Nannie C. Dunsmoor and F. D. Bullard, a myomectomy was done, removing 22 small tumors. On first exposing the uterus it appeared irregularly nodular, about 3 times its normal size, and not at all a favorable case for myomectomy. Remembering the patient's dread of hysterectomy, Dr. Lasher encouraged me to do as I had promised. There were a few very small sub-peritoneal nodules, but the larger and medium-sized tumors were interstitial, one or two at each cornu, one very low on the posterior and another in the same position on the anterior wall, the cavities of which were especially difficult to close. After those tumors apparent to sight and touch were removed, the anterior wall of the uterus was opened from cervix to fundus, and the largest two of the tumors were found to be sub-mucous with several of the smaller ones. These were easily removed, the cavity of the uterus wiped out, a gauze drain passed through the cervix into the vagina, and the incision in the uterus closed with No. 2 catgut sutures passed through the wall but not including the mucous membrane. A few superficial catgut sutures closed the peritoneum, and a small, disfigured but symmetrical uterus was allowed to fall back into the pelvis. Convalescence was without event until the eighth day, when the temperature rose to 102°. This was possibly caused by a little discharge retained in the uterus, for a small amount escaped that night (there had been no drainage), and the temperature did not rise again. She left the hospital in 3 weeks. This was a case of marked anemia with weakened nervous system, and will require many months to regain a normal condition of health; however, she began dressmaking in October, and has been sewing every week day since. She now menstruates at an interval of from 21 to 25 days, the flow lasting 3 days, and the total amount being not much more than she formerly lost in 12 hours; there is no pain. I am sure she is much happier in the knowledge that she is a normal woman than she could have been with the uterus removed, even though she was "cured." We feared that in the depressed mental condition a hysterectomy might induce melancholia. The results have proven the wisdom of the choice of the more difficult operation.

A favorable case for myomectomy presented itself recently in Dr. Lasher's practice. A tumor about the size of a small fist was discovered in the abdomen; it was freely movable, and could be placed well out on either side or above the umbilicus, but when left at rest it would settle back towards the pelvis. Dr. W. A. Edwards assisted at the operation. All thought it was of pelvic origin, with a tentative diagnosis of dermoid or fibroid of the ovary. It proved to be a sub-peritoneal fibroid of the uterus, with a fleshy pedicle about one and a half inches long; there being no inflammatory condition about the uterus, the whole organ had been carried up with the tumor in its excursion. A cuff of peritoneum was turned back and the pedicle cut through. The fibers retracted, leaving a depression in the anterior wall of the uterus, and showing that the pedicle had been formed at the expense of the muscular wall. Deep sutures were needed to

control the bleeding. The patient left the hospital in 2 weeks in excellent condition.

After a careful study of the conditions accompanying fibroid tumors, I am forced to favor early operation in any woman with a tumor presenting such symptoms as would warrant a pelvic examination; in the young, because of sterility or of the dangers incident to child-bearing, besides the systemic changes and invalidism which may be expected; near the menopause, because of the degenerations which so frequently occur.

I would urge that in all cases, the patient being under 35 years of age, where there are no constitutional contraindications and no inflammatory disease of the appendages, that a myomectomy be considered and carried out, if possible.

DISCUSSION.

Dr. W. F. B. Wakefield, San Francisco. I heartily agree with the opinion expressed by Dr. Bullard in her excellent paper. We have been generally taught to believe that these myomatous growths of the uterus were very simple in their histologic construction and very benign in their constitutional effect, being simply a mass of non-striped muscular fiber likely to disappear at or near the menopause, and only occasionally requiring to be removed because they have produced excessive hemorrhage or grown to an unusual size. Such has been the opinion that has very generally prevailed regarding these tumors, and, I regret to say, such is the opinion that still prevails in the minds of many.

When S. E. Gordon of Portland, Maine, at the meeting of the American Gynecological Society in 1893, gave voice to the opinion that the sum total of woman's life, health and happiness would be vastly improved if every uterine myoma was removed as soon as discovered, he created a perfect furor in the ranks of the gynecologists, and subjected himself to scathing criticism. I am about prepared to agree with Dr. Gordon. I think were Dr. Gordon to repeat this opinion now he would meet with less criticism.

Dr. Bullard has carefully reviewed for us the excellent publications of Noble, Cullingworth, Frederick and others, in which our attention is forcibly drawn to the many degenerative changes which may occur in connection with uterine myomata, and particularly is our attention drawn to the increased relative frequency of adeno-carcinoma of the body of the uterus associated with these growths. Issue has been taken to this statement on the ground that a tumor of the connective tissue variety could not be a factor in the production of an epithelial neoplasm. Such a view seems to me untenable if we still hold to the belief, as I think most of us do, that local irritation of various kinds plays an important etiologic role in the production of epithelial growths. It seems to me that, from the recent investigations and published reports regarding the remote results produced by uterine myomata, we are forced to the conclusion that women suffering from these neoplasms become afflicted with adeno-carcinoma of the body with much greater relative frequency than would obtain in the same number of women of the same age and walk of life whose uteri were not the seat of myomatous tumors.

I think we must change our views regarding the innocence of these uterine tumors, and I believe that the profession as a whole is being rapidly converted to the belief that these growths are far from being harmless, and, in fact, when we consider the necrotic, septic and malignant degenerations that may take place in the tumor itself, as well as similar changes that may occur in the surrounding viscera, due to the presence of these tumors, to say nothing of the cardiac and renal changes which may result from their long-continued presence, we must look upon the uterine myoma as a very decided menace to the life and health of the woman possessing it.

I am impressed with the frequency of ovarian hematoma associated with uterine myomata, and am

surprised that Noble, in his 1188 cases, reports only one case, that case occurring in Frederick's statistical review of his 125 cases. Dr. Bullard reports the occurrence of ovarian hematoma in one of the 5 cases recorded by her. Lauwers encountered 11 cases in 150 operations for uterine myomata. Rufus Hall calls our attention to this same condition. He believes it to be produced by pressure upon the ovary due to its imprisonment below the tumor, but I rather think that the condition is produced by secondary degenerative changes in the ovary itself, and am led to this belief by the fact that I have seen a good-sized hematoma of the ovary associated with a simple hyperplasia of the myometrium, accompanying which were the ordinary circulatory disturbances that characterize myomatous tumors.

PARA-TYPHOID INFECTION.*

By E. W. TWITCHELL, M. D., Sacramento.

IN 1896, Achard and Bensaude found in the pus of an inflammatory process at the sterno-clavicular joint, following a continued fever of several weeks' duration, an organism similar to those of the colon group, and designated the diseased condition in question para-typhoid. Interest being awakened, reports of cases accumulated, until at the present writing para-typhoid infections may be regarded as having an assured place in pathology.

Widal and Nobécourt in 1897 recovered from the thyroid gland a bacillus apparently identical with that of Achard and Bensaude, calling it the paracol bacillus. In the same year, Gwyn of Osler's clinic came upon a case in clinical features undistinguishable from common enteric fever, but whose serum persistently failed to agglutinate cultures of the *bacillus typhi*; a bacillus was found in the blood, however, which was agglutinated by the patient's serum in a dilution of 1-200. In 1901 Schottmüller reintroduced the name of para-typhoid bacillus, originally proposed by Achard and Bensaude, and this continues to be the preferred designation.

Schottmüller reported two distinct bacilli having much in common, each, however, refusing to be agglutinated by sera coming from patients infected with the other. These two bacilli were called respectively *Bac. Paratyphosus A* and *Bac. Paratyphosus B*, names corresponding to the *Bacilli Paratyphi a* and *b* of Buxton. They belong to the group which includes the bacilli of meat poisoning, the bacillus of hog cholera, etc. They ferment glucose like *Bac. Coli*, but like *Bac. Typhi* do not form indol or gas in lactose.

The infection is widely distributed geographically, cases being reported from most of the European countries, from South America, from the Philippines and from various points of the United States. Series of cases in a neighborhood or in a single family are common.

Pathology. The spleen is, as a rule, enlarged. The intestinal changes of typhoid were wanting in patients coming to autopsy, but the occasional report of intestinal hemorrhage, and the marked diarrhea now and then noted, would indicate that the bowel is not exempt in all cases. Ophüls has suggested the cases of typhoid without intestinal lesions may have been cases of para-typhoid. A feature of interest is the wide distribution of the bacillus in the organism, it being found in nearly all organs and tissues. This explains the extraordinarily large percentage of complications and sequelæ.

As to the comparative frequency of the two infections, by far the greater number of cases reported were of infection with *Bac. Paratyphosus B*.

Symptomatology. Clinically there is but little difference between para-typhoid and typhoid. The classic features of true enteric, nosebleed, roseola, splenic enlargement, diarrhea, tympanites, delirium, continued fever and Diazo reaction may all be present. It is usual to remark that the course is generally shorter

*Read by Title at the Thirty-fifth Annual Meeting of the State Society, Riverside, April, 1905.

and milder than that of typhoid, but upon reading reports of cases, one is impressed with the frequency of complications and their variety and severity; abscesses of various glands, purulent arthritis, osteomyelitis, pleurisy and orchitis are but instances.

It is too soon to say whether or not one attack confers immunity, as is the rule in typhoid, and apropos of this, Coleman suggests that so-called reinfection with typhoid may be a typhoid infection followed by a para-typhoid or vice versa. A recently reported case shows the probability of simultaneous infection with *Bac. Typh.* and *Bac. Paratyph.*

Diagnosis is possible in two ways only, and more likely by one—agglutination and cultivation from the blood of patient. The recent work of Grünberg and Rolly has shown how untrustworthy the agglutination test may be.

There remains, therefore, only cultivation of bacilli from the blood or other portions of the organism, and here, if examination is too long delayed, one may fail, for the blood which may be full of bacilli in early stages of the disease may be sterile later.

MESENTERIC THROMBOSIS; REPORT OF CASE.*

By DAVID A. CONRAD, M. D., Santa Barbara.

THE FOLLOWING case is of interest from its clinical course, condition found on exploratory laparotomy, and final autopsy findings:

The patient was a male, 19 years of age, family history negative. No venereal history. History of illness some months previously which was considered as appendicitis by the attending physician.

The present illness commenced with pain in the right side of the abdomen, with general symptoms suggestive of la grippe. His temperature continued high, and some days later a few rose spots made their appearance on the abdomen. About this time there was a considerable hemorrhage from the bowels, and it was considered to be probably typhoid fever. The abdominal symptoms cleared up, and there were no serious symptoms. The temperature continued high with morning remissions.

On February 19th I first saw the patient with Dr. Flint. His temperature was 103.4°. He complained of pain and distress in the abdomen. Bowels were constipated. Abdomen was slightly distended, regular in outline and tender transversely below the umbilicus. The point of maximum tenderness was at the left margin of the epigastrium, extending from there to the splenic region. Superficial and deep palpation of entire abdomen revealed nothing adventitious, pain being excessive only as before mentioned. Conditions in right iliac fossa seemed normal. Leukocytes 28,000. On February 22d he was removed to the hospital. His condition at this time was about the same. The point of maximum tenderness had shifted to the epigastrium. The liver was not enlarged, but was tender over its entire anterior surface, and particularly over the left lobe. The spleen was slightly enlarged, and there was some dullness in the upper portion of the left flank. His temperature rose to 103° in the afternoon. Perspired freely, and had one or more chills daily. Bowels moved freely with the aid of cathartics. Early in the disease free catharsis always ameliorated the abdominal symptoms. Urine negative, with the exception of indican.

It was clear that pus was present in the upper portion of the abdomen, but the difficulty lay in localizing it.

On February 23d we decided to make an exploratory operation, having the idea that there might be a sub-diaphragmatic abscess in the neighborhood of the spleen and extending over the left lobe of the liver. A green soap poultice was applied to the abdomen. On the 24th he felt so much better that we decided to postpone the operation. The tenderness had diminished considerably, and he wanted for the first time to move about in the bed and read. Alcohol compresses were applied, and he rested easily. On the 25th he again complained of severe pain, tenderness again very great over left lobe of liver and in the region of the spleen. It was greater generally in the upper portion of the abdomen. Distension was considerable, with areas of tympany and of comparative dullness. Bowels moved with the aid of enema or cathartics. He continued in very much the same condition, with the exception that he had no more chills, and temperature was lower. At times he would be quite comfortable, at others he would complain of severe colicky pain. He liked to have a pillow on his abdomen, stating that the pressure made him more comfortable.

On March 5th an exploratory operation was done, as his condition did not improve. Median incision in the epigastrium. On opening the peritoneal cavity a large quantity of dark red serum escaped, and a mass of greatly distended intestines presented; they were lustreless, dark

red in color, the veins were of large size and greatly distended with dark blood. There were no signs of peritonitis in the neighborhood of the incision. The surface of the liver was smooth, and it was not enlarged. There was nothing abnormal in the region of the spleen. There was a small amount of lymph attached to the intestines in places; it was soft and gelatinous. Below and to the left were a few adhesions. On the posterior wall of the abdomen there was a firm body extending from the region of the spleen towards the right transversely, considered pancreas. Owing to the great amount of distension, all manipulations were extremely difficult. No condition to account for the obstruction to the mesenteric circulation could be found in the upper part of the abdomen. The case was considered as one of mesenteric thrombosis, and not amenable to further operative procedures. As the original trouble was apparently in the appendix, this region was explored through a small incision, but with negative result. Incisions were closed and patient returned to bed in good condition. He seemed more comfortable for a short time after the operation, but his condition steadily grew worse. On the 11th, vomiting commenced, gradually increasing in severity. The bowels moved by enema. Death occurred on the 14th from exhaustion.

Autopsy. Body was greatly emaciated. The two operation wounds in the abdomen were in a healthy condition. Abdomen opened by median incision. On opening cavity a large amount of odorless, blood-stained serum escaped. There was considerable lymph scattered over the surface of the intestines. The small intestine was very dark red in color, in contrast to the colon, which appeared pale. The sigmoid flexure appeared to be on the right side, but this was found to be due to its great length and distension. The liver showed very slightly below the margin of the ribs. In the left hypochondrium the intestines were matted together in a large mass, but were easily separable. The mass was covered by great omentum. On separating the coils a foul thick pus exuded, which seemed to have its origin in the mesentery. On raising the stomach, pus escaped posteriorly, and was seemingly contained in the folds of the mesentery. The abdomen was otherwise free from peritonitis. The stomach was dilated, and contained a large amount of fluid.

Spleen slightly enlarged. Kidneys normal. Hypostatic pneumonia of lower lobes of both lungs.

On incising the liver, left lobe, pus escaped, and on examination was found to extend from mesenteric fold to transverse fissure, thence into substance of liver. Gall-bladder normal. Further incisions revealed the liver to contain a mass of thick, foul pus radiating in all directions, so much so that there was comparatively little liver tissue left. The path taken by the pus was evidently through the transverse fissure, behind the peritoneum, and into the folds of the mesentery. The mesenteric veins were occluded by a soft, loose thrombus; the portal was free.

Examination of intestines from stomach to rectum showed no ulceration. Appendix adherent, small, no signs of recent affection.

Smears were taken from the pus and showed a small bacillus very like the colon bacillus. No others were found. Cultures were unfortunately not made.

The case presents two interesting conditions. There can be but little doubt that the suppuration in the liver was a suppurative cholangitis, that it found vent at the entrance of the hepatic vessels and burrowing between the layers of peritoneum caused the thrombosis of the superior mesenteric vein. From the history I am inclined to consider it as a typhoid or colon infection. In the limited amount of literature at hand I can find no reference to a similar condition.

Mesenteric thrombosis, however, is a condition that is met with not infrequently. In the present case its symptoms were masked by, and masked in turn, the symptoms of the abdominal abscess, yet there were many that were characteristic.

This condition is fortunately of rare occurrence, as it is one of the most fatal of abdominal affections. As we would expect in the organs affected, the symptoms are very complex and not well differentiated, having many points in common with other abdominal affections and oftentimes disguised by those of the primary lesion which is the cause of the thrombosis. A very extensive description is given by Jackson, Porter, and Quinby in the *Journal of the American Medical Association* for June 1904, *et seq.* In an exhaustive analysis of 214 cases, they point out the difficulties connected with its diagnosis and treatment. Since that time I have noticed a few cases referred to, generally a complication of other conditions.

The condition was first described by Virchow in 1847, but was not completely described until 1875,

*Read before the Santa Barbara County Medical Society, July 10, 1905.

when Litten published an article depicting its clinical features. Both the artery and vein may be affected, or but one. The symptoms are similar in either case. The pathological changes are those of hemorrhagic infarction depending on the degree of occlusion and its rapidity. Grouping the symptoms as in other abdominal affections, and considering the most prominent and constant, we find as we would expect, pain, vomiting, tenderness, distension, constipation or diarrhea, and temperature.

Pain is very constant, being absent in but 8% of the cases analyzed. Its nature is variable. In a majority of the cases it is general, in others it is distinctly local. It is apt to be constant, with very sharp, colicky exacerbations. In this case it was peculiar in the fact that the patient seemed to derive great relief from pressure on the abdomen. It is apt to be sudden in onset, and may be distinctly remittent. Vomiting and nausea may or may not be present, depending on the severity of the process. In some cases constipation is the rule, in others diarrhea; neither is characteristic. The stools may be normal for a time, then followed by the passage of blood. In about 40% of the cases blood appears in the stools at some time.

Tenderness is generally well marked. It may be general or local, more intense at places, or shifting. It is frequently modified by the primary lesion. It is apt to appear late, and is a sign of increasing severity. Temperature may be subnormal, but may be raised owing to complications. Leukocytosis has been found in uncomplicated cases.

Distension takes place early. In conjunction with effusion, which is always present, it may give areas of tympany separated by those of comparative dullness, where the distended coils press closely against the anterior abdominal wall.

As in other conditions it is very seldom that we have all these symptoms well marked. They may simply be those of intestinal obstruction, or they may be completely masked by those of another lesion.

Prognosis is very grave, most of the cases are definitely recognized only at autopsy, or on opening the abdomen for some other cause. There is no hope of collateral circulation being established, and the gangrene which ensues is fatal.

Treatment is very unsatisfactory. It presupposes treatment of any original lesion, then excision of the portion of intestine affected, if not too great. This is a very difficult procedure owing to the amount involved, and to the low condition of the patient. Jackson, Porter and Quinby advise an excision of the affected part, to be followed by the bringing of the ends out on the abdominal surface, creating an artificial anus, relieving distension and saving much time. Should the patient gain, subsequent closure is a comparatively easy matter.

A New Journal.

We have received Vol. 1, No. 1, of the *State Board Journal of America*, issued in September, 1905. The objects of this publication seem to be devoted to the interests of licensing boards of medicine, dentistry and pharmacy, and will doubtless be of much interest to students and to colleges. All of the information contained in the present number is devoted to matters pertaining to examinations, etc., and the examination questions of quite a number of examining boards are given. The idea is certainly ingenious and doubtless this journal will fill a certain field of usefulness.

Education in the Orient.

Among its miscellaneous minor articles, *The Open Court* for October contains three which deal with the problem of education as it is presented in different parts of the Orient. One describes the new elementary text-books which are to introduce modern ethical principles into the minds of the youthful Japanese.

STATE CONTROL OF TUBERCULOSIS*

By CHAS. C. BROWNING, M. D., Monrovia.

IT IS NOT my purpose to attempt an exhaustive discussion of the subject, but to call attention to a few salient points. I assume, without discussion, that the state should undertake to control the spread of tuberculosis, and to do this it is necessary to exercise more or less control or direction of the individuals suffering from the disease and provide for their care.

There is, and there will probably continue to be, considerable diversity of opinion in regard to the degree of interference with personal liberty which is necessary or advisable in our attempts to control the spread of tuberculosis, and of the requirements which may reasonably be exacted of those who sustain certain relations to them. The discussions regarding the nature of the disease and the manner of its communication, which have occurred during the past quarter of a century between members of the medical profession, have been watched with unusual interest by the general public, on account of the prevalence of consumption, and the attitude has varied from that of incredulity, almost amounting, at times, to derision, regarding the communicability of tuberculosis, to the most intense phthisiophobia, in many instances of late years, imposing many inconveniences and hardships, at times amounting to little less than cruelty, to sufferers from this disease.

Progress in all branches of science is slow, and inference drawn from a little knowledge is apt to produce an extremist. This has been exemplified in regard to the subject under discussion.

The cause of tuberculosis has been exhaustively studied, and the following facts established beyond reasonable controversy, to wit: Tuberculosis is a disease communicated from man to man, most frequently by means of dried sputum or droplets containing tubercle bacilli, thrown out by coughing by the consumptive. This being true, the prevention of these organisms finding lodgment in soil suitable for their development will solve the problem.

One of the most important steps is education. Much has been done in this way, and much remains to be done (some undone). It is the duty of the state directly and through the political subdivisions to assist in this work of education; or, rather it should be the province of the state to direct this work.

It is now quite universally accepted by the people at large, that consumption is communicable, and very exaggerated ideas of the dangers of the presence of a consumptive patient are quite generally entertained. The publication of articles in the popular periodicals is responsible to a considerable degree for this. Many of these articles were not written by physicians. While they have been of service in awakening an interest in this subject, and I believe much good has been accomplished, it is to be regretted that the information given has not always been in accordance with established facts. Unfortunately, physicians have at times fostered these ideas.

The ignorant and careless consumptive is dangerous; the enlightened and careful consumptive is not.

To place in the hands of the people reliable information regarding this and other phases of the subject on which the people should be informed is, we believe, clearly within the province of the state, and information emanating from or coming with the approval of the state authorities will, or should, command respect from the people and inspire a degree of confidence which cannot otherwise be obtained.

The circulars issued by the State Board of Health during the past year are valuable, and should reach not only the health officers of the state, but every physician and school teacher in the state. (Here I beg to make acknowledgment of having been

*Read before the California Public Health Association, Riverside, April, 1905.

avored with copies.) I believe that great good can be accomplished, far surpassing the cost of printing and distribution, by having them reach the homes of as many citizens of the state as possible. This could be accomplished in a most effective manner through the schools, at a nominal cost for distribution. Can it not be done? At the same time such other literature regarding public sanitation as is deemed desirable could be distributed.

Another channel through which many who might be missed by the above is through the different labor organizations. The members of these organizations furnish many victims of this disease, who, with their families, sooner or later become beneficiaries of the relief funds of the organizations or the state. In connection with this, I desire to mention workmen's insurance against sickness, accident and death, under the supervision of the state along the general lines which have proven so satisfactory in Germany. A discussion of this would require more time than I have at my disposal, but I recommend it to your careful consideration.

These organizations have found it profitable to educate their members in regard to sanitation and preventive diseases, including tuberculosis; also, to establish places where they may be treated before the time that a reasonable probability of cure may have passed.

This brings us to consider the establishment of State Sanatoria for the care of tuberculous patients. That a bill was passed by our last state legislature, providing for the establishment of a State Sanatorium for the Treatment of Curable Cases of Tuberculosis is, I presume, well known to all of you. This bill was prepared by the Committee on Tuberculosis of the State Medical Society and a committee of the California Club of San Francisco. It was introduced into both houses—in the Senate by Ralston, where it became No. 706; in the Assembly by Drew, where it became No. 867. In both houses it was referred to the Committees of "Public Health and Quarantine" and "Finance," and in each case it was recommended that it "Do not pass." Notwithstanding this, it passed the Senate without an opposing vote, and the Assembly with but six votes against it. It had the endorsement of numerous influential organizations throughout the state. It failed to become a law by the expiration of the time limit, without having received the signature of the Governor, for the reason, as given by himself, "I found that it was quite out of the question to find money to meet the proposed appropriation. The legislature appropriated several hundreds of thousands of dollars more than the revenues of the next two years are expected to produce, and there was nothing to do but to make reductions where reductions were possible. As the state sanatorium appropriation was only to establish a new institution, I thought it would have to give way to the necessity for providing adequately for the institutions which we already have."

While I am not disposed to censure the Governor or call in question the wisdom of his action, under existing circumstances, I confess to a disappointment that such action was deemed necessary. The task of the Governor is not at all times an easy one. He is called upon by the progressive element to make the improvements they and he know should be made, and at the same time is subjected to criticism by all for an excessive tax rate. If new institutions cannot be established without interfering with the adequate support of those already in existence, we must cease to establish new ones, provide more funds, or alter the system or extent of support required by those we have. I believe, without trespassing on your time for discussion, that the establishment of such an institution is demanded in the near future on account of economic considerations, independent of any sentimentalism or demand from a humanitarian standpoint which may be associated with the subject.

I have thought for several years that the state is supporting—or practically so—a large number of persons in our insane asylums which it should not be called upon to do. I can see no more reason why the state should support a person possessed of property who is insane than a person suffering from any other form of disease. If the state will offer proper encouragement, surrounded by proper safeguards and restrictions, private institutions will be established that will care for many of these patients to better advantage than they can be cared for in a state institution, where all classes are received and associated together, and those who are indigent and remain in the state institutions will also gain by the change. I believe the money thus saved can be expended to better advantage to the state and humanity in caring for hopeful cases of tuberculous poor. I would not take away one cent or remove the most remote factor which would aid in the recovery of an insane patient, but I believe such segregation would increase their chances of recovery; and if the change should in any way aid in the care of the tuberculous poor, much would be accomplished. The relation of tuberculosis and insanity may well be considered in this connection, but time forbids.

Improved facilities for the early detection of cases of tuberculosis and their proper care in our public institutions should be established. With proper care in these institutions, where the direction of the inmates is absolutely under the control of the authorities, a case of infection should not occur, and a large per cent of patients in the first stages should be cured. Large buildings illly constructed, overcrowded, the incompatibility of warmth during cold weather, proper ventilation and economy (which is doubtful), unwholesome and insufficient food—insufficient number of medical staff are among the obstacles to be surmounted before a realization of this condition can be hoped for.

Among the excellent measures which became laws through the acts of our legislature during the last session were the ones giving increased power to our State Board of Health:

It shall maintain a bureau of vital statistics under the supervision of its executive officer, where shall be collected and recorded all births, marriages and deaths, burials and cremations within the state. These statistics, together with the number of cases of communicable diseases, and such further comparative statistics and information as may be deemed of value to scientists, the medical profession, the general public and aid in the maintenance of good health conditions, may be published by the board in such manner and at such times as it may deem proper.

This, I take it, will allow them, at their discretion, to cause cases of tuberculosis to be reported to the proper health authorities, together with such other information as they may deem advisable for the best interest of the patient and the community at large; and will also empower them to formulate and enforce such rules as they may deem proper. That such laws have proven efficient in other states is now beyond dispute. New York, which started with encouraging voluntary report of cases, and later making reports compulsory, reports most encouraging results. These rules can be so formulated as not to be objectionable to patients or physicians in charge and yet be efficient. It is to be hoped that our State Board will have sufficient funds at its disposal to enable it to avail itself of its privilege and take similar action.

In closing, I desire to call attention to one point which, while not new, has not received the prominence it deserves by writers of literature which is to go into the hands of the general public, viz., the benefit which the patients derive from the careful destruction of their sputum. The literature teems with pleas for the public. What is of greater importance to the patients is their individual interests. Impress upon them that they are the ones who are most liable to be injured by reinfection through carelessness with the discharges, on account of their weakened condition and consequent reduced powers

of resistance, and a new interest has been awakened. I believe that many patients are deprived of opportunity for recovery by their own carelessness by keeping the air, especially in their sleeping rooms, continuously infected with dust from the dried sputum, by the use of cloths, which for convenience are kept about the bedding, or by attempting to expectorate into receptacles placed beside their beds, a portion of the expectorate being thrown on the floor, where it dries. Impress on them the danger to themselves and the precautions necessary to protect themselves, and if this can be accomplished, incidentally the public will be protected.

If the patient is indifferent to his own interest, there should be means to enforce the rights of others.

Death of Dr. Mules.

Dr. Philip Henry Mules, widely known as the originator of the "Mules Operation," died at his home in Greasford, England, last month. Dr. Mules was a very enthusiastic oculist, and was devoted to his profession and his professional work. In his home sphere he was highly esteemed and loved, and his death will undoubtedly be keenly felt.

Dr. Mules' son, Dr. J. H. Mules, is practicing medicine in this state at East Auburn, and is Secretary of the Placer County Society.

Death of Dr. Todd.

The members of the Society will learn with deep regret of the death of Dr. Thomas Milton Todd at Auburn on the 15th of September. Dr. Todd was for many years a member of the State Society. He located in Auburn in 1871, and in 1875 was appointed physician and surgeon to the County Hospital, a position which he held until his death. Dr. Todd was, for most of his professional life, in Auburn, closely associated with Dr. Rooney, President of our Society.

Cheap Fees.

Dear Dr. M: Your letter enclosing application for appointment as Medical Examiner, with our rates struck out, received.

Would say in reply that we shall be compelled to get along without your services. The rates given on this blank are the rates made by the Board of Directors, and we have no authority to change them. If a physician does not wish to do the work at our rates we are compelled to find someone who will.

At the present time there is so little difference in the schools, as far as ability or educational knowledge is concerned, that we are disposed to accept work from a man of any school, whose standing in the profession and community is satisfactory.

Therefore, as it seems your Society is not disposed to allow the members to work at our rates, until such time as the Board of Directors see fit to change these rates we shall be compelled to look elsewhere for our Examiners. Thanking you for your frank letter, we are, Very truly yours,

Medical Director.

Typhoid vs. Tuberculosis.

J. A. Wyeth, New York (*Journal A. M. A.*, May 6th), gives notes of two cases of tuberculosis in which the disease appears to have been arrested or cured by the occurrence of typhoid fever. In both cases there was a marked increase of body weight, together with the disappearance of the symptoms of the tuberculous disease. Both have remained well for about four years since the typhoid attack. Dr. Wyeth is indebted for the notes of these cases to Dr. Francis W. Gallagher of El Paso, Texas, to whom he refers inquirers for further information. He asks, however, whether there might not have been in these cases an antagonism between the typhoid and the other pathogenic germs, and hence a suggestion of another possibility of immunity from the dreaded scourge of tuberculosis.

COUNTY SOCIETIES.

Alameda County.

The Alameda County Medical Society held its regular monthly meeting on September 18th.

Dr. C. H. Dukes read a paper on the "History of Puerperal Sepsis," outlining the development of our knowledge of this subject from the time when its contagious nature first began to be recognized early in the nineteenth century, through the disputatious middle portion of the century, down to the period of complete acceptance by the medical world of the theory of infection and contagion in this condition.

Dr. E. N. Ewer read a paper on the "Treatment of Puerperal Sepsis," in which, after discussing briefly the pathology of the condition, he described at length the treatment advocated especially by Pryor, curetting of the uterus, packing the uterine cavity with iodoform gauze, opening the posterior cul-de-sac and drainage of the pelvis by iodoform gauze packed about the infected uterus. He stated his belief in the efficacy of curettement in most of these cases, provided that it was gently and carefully done, using only sufficient force to remove with a blunt curette blood clots and debris together with the superficial necrotic layer of the endometrium. Rough curettement deep into the uterine tissues did more harm than good. Illustrative cases were cited, and Pryor's method of treatment warmly commended.

The discussion of the papers was very full and free, too much so for a detailed report. The consensus of opinion, however, was strongly in favor of the Pryor method of treatment. Several cases were cited of patients profoundly septic who recovered after vigorous treatment along this line with free use of saline solution and stimulation. No patient with puerperal sepsis should be despaired of, as apparently hopeless cases result in recovery at times, if treatment is vigorously pushed. Several speakers laid stress upon the prophylaxis of puerperal infection by careful attention to all the details of aseptic midwifery, but even with the greatest care, sepsis will occasionally occur. A certain proportion of these cases, however, would be prevented if obstetricians made a routine examination of the patient during pregnancy for possible sources of infection in the woman herself, and instituted proper treatment for such as were discovered.

Through the efforts of the Legal Committee of this Society and the aid of local physicians, illegal practitioner Clark, of Haywards, was recently convicted and fined \$100.

T. C. McCLEAVE, Secretary.

Napa County.

Napa County Medical Society met in St. Helena on September 26th, 8 P. M.

The paper of the evening was "Studies in Psychology," by Rev. Father Jos. F. Byrne of Napa (no discussions), who was later elected an honorary member. Several interesting clinical cases were reported by members present.

Dr. Morton gave an interesting talk on County Societies and on the method of sterilizing gloves and hands for surgical operations.

Society adjourned at 10:45 P. M. to partake of a raviola supper.

Members from Calistoga, Napa and St. Helena were present.

J. L. ARBOGAST, Secretary.

Orange County.

The Orange County Medical Association held its regular monthly meeting October 3d, with ten members present. The following amendment to the by-laws was adopted:

"Any member of this Association who violates the Code of Ethics of the American Medical Association, engages in irregular specialties, advertising, lodge

or other practice which is contrary to the regulations of this Society shall be deemed guilty of a professional misdemeanor, and shall be subject to discipline according to Article VII of the Constitution of this Association." (Article VII provides for expulsion, suspension or reprimand.)

Dr. Freeman of Fullerton presented the paper of the evening, entitled, "Chronic Catarrhal Gastritis in Infants," which provoked a spirited discussion.

H. S. GORDON, Secretary.

Riverside County.

The Riverside County Medical Society met in regular session at the home of Dr. W. W. Roblee, October 9th, at 8 P. M.

After the regular business the members listened to a very able paper on rheumatism by Dr. Roblee, which put it clear to the physician that he must be sure of his diagnosis before treating all pains and throbs in the various parts of the body as rheumatism. That we must not expect happy results from the administering of anti-rheumatic remedies to patients suffering from arthritis deformans, pleurisy, gout, trauma, or a dozen other conditions which may simulate rheumatism.

Dr. O. J. Kendall read a paper on "Tuberculous Peritonitis," bringing out many valuable points to be carefully observed in the management of such cases.

The Society was then invited to the banquet hall where we certainly did justice to the bounteous good things prepared by Mrs. Roblee.

With a vote of thanks to Dr. and Mrs. Roblee, the Society, about an hour later, adjourned till the November meeting.

H. R. MARTIN, Secretary pro tem.

San Bernardino County.

San Bernardino County Medical Society met pursuant to adjournment in the old Court Room, in San Bernardino, Dr. Hoell Tyler, President in the chair, and Dr. J. M. Hurley, Secretary, at the desk. The minutes of the last meeting were read and approved, Dr. Wood Hutchins of Oregon, and Dr. V. C. McCormico of Louisiana, being present as visitors.

Application for membership of W. B. Power, was voted upon and unanimously elected a member of this Society. Communication from Dr. J. P. Booth, one of our members who lives in Los Angeles, was read by Dr. Hurley, the Secretary, and was received by the association with applause, and the same was ordered to be filed.

Dr. Peyton, who was to have presented a paper, was not present. Dr. Mills reported a case of prostatectomy, that he in company with Dr. Credford, had performed and at the same time removed a very large stone from the bladder. He reported the case as not fully recovered, but still under treatment. Dr. Mills also presented a gall stone that he had removed from the gall duct of one of his patients.

Dr. Wood Hutchins was called upon by the President to give his views and objects in the Arrowhead Sanitarium. Dr. Hutchins gave a synopsis of what was intended at the Spa Sanitarium, and some of his observations upon the treatment of specific complaints at other Spa Sanitariums: notably, the Hot Springs of Arkansas. The treatment there being inunction of mercury, the work being done by colored men, these men being selected in consequence of their being immune from the effects of mercury. He also stated that he saw good results by wearing a package of blue ointment around the neck of the patient.

Dr. McCormico was called upon by Dr. Hurley to give his observations and opinions upon the use of quinia, in that very malarious country, Louisiana, he being fresh from the field. Dr. Hurley asked this of Dr. McCormico in consideration of the fact that

Professor Manson was reported as having said in a lecture in San Francisco that quinia would cure any case of malarial fevers. Dr. McCormico gave it as his observations that in the treatment of malarial fevers in Louisiana, that there are many cases of such fever in which quinia or any other form of this remedy gave no results. This being the experience of Dr. Hurley in various malarial countries. Dr. McCormico said that many such cases do go on until it is worn out, or the patient is worn out, and dies from debility or some other fever supervening. He gave his views from large experience in malarial countries that quinia is by no means a specific for this disease.

Under the head of new business, Dr. Strong introduced the following amendment to the by-laws, viz: That the section relating to the place of meeting of this association be so changed that all meetings of this Society shall be held in the Y. M. C. A. parlors, in the city of Redlands, on the second Wednesday of each month; this, under the rules, was ordered to lay over one month, adjourned to meet on the second Wednesday in November, in the Y. M. C. A. parlors, at two o'clock P. M., in Redlands.

J. M. HURLEY, Secretary.

San Francisco County.

The regular monthly meeting of the San Francisco County Medical Society was held Tuesday evening, October 10th. The meeting, as usual, was well attended and the program was an interesting one.

Among the papers presented, that of Dr. H. A. L. Ryfkogel on "A Case of Interscapulo-thoracic Amputation for Sarcoma" and "A Case of Mercurial Intoxication" by Dr. Emile Schmoll received special attention.

Dr. Ryfkogel, demonstrating a case of interscapulo-thoracic amputation for sarcoma: This patient is 27 years of age. About 7 months ago noticed some pain in the upper arm and shortly afterward noticed slight swelling there. A couple of months after, while taking a bath, reached behind himself and there was a sudden spontaneous fracture. I saw him 5 months after that and the mobility of the shoulder joint was diminished. The swelling of the upper arm invaded the soft tissues. X-ray picture was taken. A few days afterward an incision was made over the growth. The growth was curetted. Microscopic examination showed it to be a case of osteosarcoma. After that typical quarter amputation was made. The operation was very easy and the recovery uneventful.

Discussion: Dr. Rixford: It is a surprisingly interesting and simple operation because nature has almost done it after the vessels are tied, and the clavicle cut; and the indications for the operation are of very great importance. As a primary operation for sarcoma of the shoulder the statistics are excellent. As a secondary operation statistics are not so good. Personally I have had one similar case and in that case it was a secondary operation. It is now five years since the operation and there is as yet no recurrence.

Dr. Ryfkogel: In looking up this operation I found about 200 of these operations that had been done and the primary mortality was only about 70%, showing exceedingly simple operation. But the mortality of the secondary operation is about 15%. As Dr. Rixford said the secondary results are not so good. The recurrences have been very close to 50%. Some say 30 and others say 50%.

"A Case of Mercurial Intoxication," by Dr. Schmoll: Discussion: Dr. Jellinek: I would like to call attention to the etiology of arterio sclerosis and mercurial poisoning. Several articles have been written. In view of our knowledge we call these cases so-called secondary sclerosis and these conditions might develop in this case though at present there are very few symptoms present.

Dr. Schmoll: In the absence of autopsy findings it is very difficult to say whether there is any devel-

opment in this case or not. The tremor has become markedly less. It is true that the prognosis is not very good as the tremor has never entirely disappeared and as soon as the patient becomes exposed he will get the tremor again.

New by-laws were adopted.

H. E. ALDERSON, Secretary.

San Joaquin County.

The last regular meeting of the San Joaquin County Medical Society was held September 29th at the residence of Dr. W. J. Young. Members present: Drs. E. A. Arthur, E. Harbert, D. F. Ray, S. W. R. Langdon, H. E. Sanderson, W. J. Young, F. R. Clarke, A. W. Holsholt, J. P. Hull and Barton J. Powell. Dr. Blackmun was a guest.

Dr. Young presented a paper on an "Interesting Post-mortem Case." A young man 16 years of age working as a plumber's apprentice was injured while wrestling with some of his companions. He complained of pain in his hip and abdomen. Four days afterwards the young man died of meningitis. There was no tuberculous history, and no previous illness. At the post-mortem a quart of pus was removed in the lumbar region. There was a necrosis in the lumbar vertebra. In speaking of the tuberculous condition, Dr. Young also took occasion to describe the Lorenz method of treating tuberculous hip joint cases, having recently studied in the Lorenz Clinic. The discussion was opened by Dr. H. E. Sanderson, and followed by all the members present.

A communication was received from Dr. B. F. Surryhne of Modesto seeking admission to our society. The Northern District Medical Society have decided to meet in Stockton, November 11th next, and the local society decided to entertain them while in our city. Papers will be read during the evening and afternoon, to be followed by a banquet. It is expected that there will be a large attendance, and many interesting papers have been promised, as well as an elaborate entertainment for the visiting doctors.

Before adjournment Dr. Young banqueted the members present.

BARTON J. POWELL, Secretary.

Santa Clara County.

The regular monthly meeting for September was held at the Bristol Hotel, San Jose, on September 20th, convening at the usual hour with the following attendance: Dr. Asay in the chair, and Doctors Hogg, McNary, Fraser, Harris, Jordan, Snow, Witter, Holbrook, Cothran, Cooper, Southworth, Stirling, Chilson and Osborne, Secretary.

Dr. Asay as Councillor of the 5th district, embracing the counties of San Mateo, Santa Cruz, San Benito and Santa Clara, announced that there had been called a district meeting for October 20, 1905, to be held in Hale's Hall, San Jose, at the hour of 2 P. M. and to which meeting all ethical physicians in said district are cordially invited. Dr. J. B. McCormack, representing the American Medical Association will be present to address the meeting in the interests of medical organization and kindred topics. In the evening there will be tendered Dr. McCormack a reception and banquet at the Hotel Vendome, San Jose, the former extending from 8 to 9, and the banquet to immediately follow. This function will be under the joint auspices of the County Medical Society through its Executive Committee and the Commonwealth Club of Santa Clara Valley. The following have been invited to be present, the majority of whom have already accepted our invitations: Dr. Geo. C. Pardee, Governor of California; Dr. Martin Regensberger, President, and Dr. N. K. Foster, Secretary of the State Board of Health; Dr. J. B. Hall, Colonel and Assistant Surgeon General, U. S. A.; Dr. J. S. Cummings, Federal Quarantine Officer, San Francisco, U. S. Public Health

and Marine Hospital Service; Dr. Philip Mills Jones, Secretary State Medical Society.

Dr. Snow of Stanford presented the paper of the evening—subject, "The Health of a University." The paper was an exceedingly interesting presentation of the methods and forms in vogue at Stanford to insure individual health of students, and the general sanitation of quarters and student environment, and gave elaborate statistics and striking results of the plans under demonstration. The paper was discussed by Doctors Cothran, Stirling, Fraser, Jordan, Chilson, McNary, Witter and Osborne.

Dr. Cothran presented the following resolution, which was unanimously adopted:

Resolved, Any and all essays or papers read before this society shall, immediately upon the reading thereof, become the exclusive property of the Society and shall not be given out for publication except by order of the Society expressed by a majority vote of the members present.

Certain matters relating to irregular practitioners and to medical service, considered to be inimical to the interests of the regular medical practice, were reported to the Society. On motion these matters as well as the subject of so-called "Contract Practice" were referred to the Committee on Ethics for investigation and report back to the Society.

The Society authorized and directed the President to appoint a special committee on Fee Bill, to report to the Society as soon as practicable, and the following were appointed as such committee: Doctors McNary, Chairman; Wagner and Thos. Kelley.

Dr. John L. Benepe of San Francisco, having removed from the jurisdiction of this Society, asked for transfer papers. His dues and assessments for the current year having been paid in full his request was granted.

On the amendments proposed by Dr. Wagner at last meeting the following action was had: On first amendment fixing the yearly dues at five dollars instead of two and one-half dollars the vote was unanimous, the new schedule going into effect January 1, 1906. The second amendment proposed relating to fees accompanying applications, no action was reached, the Society preferring that consideration of same should lay over one month.

The next stated meeting will be held at the Bristol Hotel, San Jose, on October 18, 1905, at 8 o'clock P. M. sharp. The paper will be by Dr. M. V. Mulcahy. Subject, "Medical Ethics."

A. E. OSBORNE, Secretary.

The Society of Social and Moral Prophylaxis.

The program at the October meeting was as follows:

1. Should the youth of the country be educated in a knowledge of sexual physiology and hygiene?
2. What should be the nature and scope of this education?
3. At what age should this instruction be given and should it be progressive according to the age of the individual?
4. Through what agencies should this instruction be given—through parents, physicians or teachers? Should our educational centers—high schools, colleges, and universities—be utilized for this purpose?
5. Should the teaching of sexual physiology be incorporated in our text-books of elementary hygiene?

As the educational feature of the Society's work is an important one, the Executive Committee would be glad to have a general expression of opinion from the medical profession as to the availability and practical value of this proposed education. Physicians who have given serious thought to the subject are invited to send to the Secretary their views upon any or all of the questions submitted for discussion. Such communications will be analyzed and tabulated and form the subject of a report by the Committee on Education.

E. L. KEYES, JR., Secretary.

New York, October 12, 1905.

MEDICAL SOCIETIES.

SAN FRANCISCO SOCIETY OF EYE, EAR, NOSE AND THROAT SURGEONS.

The regular meeting was held on Thursday, September 20, 1905, at 8:15 P. M., the President, Dr. K. Pischel, in the chair.

The following is the scientific program in abstract: Dr. W. L. Snow, of Palo Alto, read a paper entitled: "Some College Influences on Students' Eyes" (published elsewhere), eliciting this discussion.

Dr. F. B. Eaton: This paper is very interesting to me and I think to most of us. I am sure that all of us have had numbers of the students of the different universities under our care. I have noticed that the greatest number broke down about Christmas time, and the mental, as well as the physical, condition was often distressing. They were afraid that they could not pass the examinations and were distressed both in body and mind.

I am glad that so much is being done to call the attention of the parents and family physicians to the condition of the students. Now we see comparatively few breaking down which is undoubtedly due to the careful provisions made.

This question of physical standard, of which the doctor speaks, would be difficult to decide upon. I think different physicians or physical culturists would have different standards.

As far as the eye is concerned it seems to me that I can only make the suggestion that there should be no organic disease of the eye of importance, or fundus trouble, and no astigmatism over one-half dioptre uncorrected, or hyperopia or myopia. As long as the general health is vigorous many of our glasses can be thrown aside.

Dr. K. Pischel: I am pleased with the statement of Dr. Snow that not only the refraction should be looked after but the general health. We hear so often of girls complaining of headaches. Very frequently they are not caused from the eye at all but from incorrect feeding or bad air. At the same time the eye should be carefully looked after, but keep in mind that glasses alone will not cure headaches.

Dr. C. S. G. Nagel: Dr. Snow mentioned granular lids as distinct from trachoma. Do I understand you to use that term as synonymous with follicular?

Dr. Snow, closing discussion: With regard to Dr. Nagel's question I mean simply granular lids. But few know of trachoma and most speak of the condition as granular lids. The University Council has passed a new entrance credit to be known as, hygiene. Credit is given to high school students who have covered a specific amount of questions in public health, work in the field and physical training. My purpose in urging it to the Council has been for the University to place its approval on the health side of the student's life, and encourage men and women to give time to this study. The only solution of our attempts will come when the Health Boards recognize the fact that spasmodic medical examinations and superficial physical training must be placed on a scientific basis.

Dr. C. S. G. Nagel demonstrated a case of ablatio retinae e contusione, reading a paper on the subject. He said, in part: The lesion not complicated by rupture of the sclera or inner membranes of bulbus is rare. With these complications loss of vitreous or hemorrhage offer ready explanation. Also in diseased eyes with detached corpus vitreum a detachment of the retina might easily come about through "subhyaloid" fluid or from transudate between retina and choroid.

History of case: Healthy individual with normal eyes. Prompt loss of vision in eye after blow three weeks ago. Changes in upper part of the vitreous and extensive detachment of retina upwards.

Leber's explanation of promptly healed scleral rupture gives no insight into the causation or mechanism of ablatio retinae. Writer suggests partial

breaking up of vitreous, simultaneous peripheral dehiscence of retina admitting of fluid behind it.

Dr. W. Scott Franklin: Rupture of the choroid is a comparatively rare condition and especially so multiple rupture. The cleft is usually semilunar and concentric with the optic nerve. The white streaks in this case are in a grosser sense concentric with the nerve, and the lower one in particular, looks to me distinctly like a rupture of the choroid, though there is no line of pigment on either side. I cannot realize how an edema should produce such an opaque whitish streak with the clear cut edges. I consider this a case of multiple rupture of the choroid.

Dr. Eaton: In this case there is not only one streak but I observed several white streaks. I cannot understand how edema of the retina can happen in such a line as that. I saw several lines parallel to each other.

Dr. Nagel, closing discussion: I can only repeat that the fundus was so visible when I examined it before that I fail to see why rupture should not have been apparent then. Moreover there ought to be in rupture sanguinous detachment. The details and pigmentation of the fundus were very visible always. I am sure that this is edema of the retina.

A paper was read on "The Relation of the Optician to the Oculist," eliciting a spirited discussion.

The society adjourned until October the 19th.

W. SCOTT FRANKLIN, Secretary.

San Joaquin Valley Medical Society.

The twentieth semi-annual session of the San Joaquin Valley Medical Society was held in Fresno, October 10, 1905.

The following were elected to membership: Dr. L. R. Willson, Fresno; Dr. H. V. Monett, Turlock; Dr. W. T. Crawford, Fowler; Dr. M. A. Gilreath, Selma; Dr. R. W. Musgrave, Hanford; Dr. Charles Weddle, Dinuba; H. V. Armistead, Newman.

Those present were Drs. Aiken, Barr, Dunn, Galehouse, Russell, Sherman, Trowbridge, Doyle, Manson, Rowell, Perry, Kjaerbye, Couey, Loper, Hayden, Anthony, W. T. Maupin, J. L. Maupin, L. R. Wilson, Davidson, Miller, Moradian, Parsegan, Gebhart, and J. R. Walker of Fresno; Kellogg, Fowler, Carson, Bakersfield; Hildreth, Delano; Cross and Pettit of Visalia; Weddle, Furtney and Whittington of Dinuba; Felton and Musgrave of Hanford; McCubbin of Lemoore; Bering of Tulare; Lilley, Merced; Monett of Turlock; A. W. Morton, San Francisco.

The papers were all very thorough and well discussed.

The following were elected officers for the ensuing term: President, W. S. Fowler; First Vice-President, A. M. Smith of Merced; Second Vice-President, C. W. Evans, Modesto; Third Vice-President, R. W. Musgrave, Hanford. The Secretary, Assistant Secretary and Treasurer, holding over.

In the evening the members and visitors attended a banquet given by the Fresno County Medical Society at the Sequoia Cafe. The next meeting will be held in Bakersfield the second Tuesday in March, 1906.

J. R. WALKER, Secretary.

Resolutions on the death of Drs. W. J. Baker of Fresno, and A. L. Willson of Tulare. Your committee to whom was referred the matter of drawing up resolutions relative to the recent death of Dr. W. J. Baker of Fresno, and Dr. A. L. Willson of Tulare, members of this society, hereby report the following:

Resolved, That the San Joaquin Valley Medical Society hereby express its regret at the loss by death of two of its members.

Dr. Baker, though formerly in active practice in the East, had not been following the profession of medicine in California. He had however retained his interest in everything pertaining to the profession, and took part in the proceedings of this Society. He was an educated gentleman, public spirited, of kindly nature, and an honored citizen.

Dr. Wilson was a graduate of the Missouri Medical College of the class of 1884, and practiced in California since 1895. He was a successful practitioner, well liked in his community, and took an active interest in fraternal and public affairs. He left a good family to perpetuate his name, and a record of good work and good deeds.

Out of respect and in kindly remembrance of these our medical associates be it,

Resolved, That these resolutions be entered upon the permanent records of this Society and published in the STATE JOURNAL OF MEDICINE.

CHESTER ROWELL,

W. T. BARR,

C. D. PERRY,

Committee.

San Francisco Polyclinic Gathering.

The President, Dr. Ryfkogel, in the chair. Dr. F. B. Carpenter presented a patient upon whom he had operated for carcinoma of the pylorus.

The patient, about 50 years of age, had suffered with various gastric symptoms for about 6 months, and at the time of operation exhibited a palpable tumor. At the operation, two-thirds of the stomach was removed, and the cut end of the duodenum was anastomosed to the middle of the posterior surface of the stump. No difficulty was experienced in bringing these parts together, and a Murphy button was used.

The button came away 3 years and 3 months after the operation, its passage being preceded by a spasm of very severe pain. The growth was found to be carcinomatous, and at the time of presentation, 6 years after the operation, there was no sign of recurrence. The patient has subsequently submitted to two operations, one for pleurisy and one for strangulated hernia.

Dr. William Martin presented the two following cases, which were discussed with interest:

Mrs. —. Calcified lens; luxated into anterior chamber. Eye blind from injury in childhood, 25 years since.

Two weeks since, she was watching her husband calcimine a ceiling when something fell into her eye, irritating it. On looking in a glass the following morning she observed a white body in the eye, and thought it must be lime that had fallen in the previous day. Dr. Martin made a linear section, with the expectation of removing it, but found it firmly adherent to the iris. The capsule ruptured and chalky masses were removed with the iris forceps; as considerable force would have been required to drag it out, further procedure was postponed until patient was prepared to enter a hospital. Very little reaction followed operation performed in the clinic.

Mrs. —. Age 30. Keratitis punctata superficialis (Fuchs). The condition is not a very frequent one. In this case the primary trouble appeared in the sclera, followed by a cone-shaped opacity in the upper outer temporal segment of the right eye; there was considerable photophobia. The disseminated opacities, which are still present, followed, while the inflammation of the sclera and the marginal cone have disappeared, leaving a clear marginal space at the limbus. The condition is probably due to some systemic disturbance, but so far no definite cause can be determined. There is no history of luetic or rheumatic disease in this case. Salicylate of soda is being administered. The acute period has passed, and the patient is free of pain, only the disturbance of vision annoys her.

Other patients were presented and several interesting cases reported, which will be published subsequently.

Drugs and the Diazo Reaction.

Incited by a statement in the medical press that certain drugs will cause a positive reaction to the usual diazo test, W. W. Golden, Elkins, W. Va. (*Journal A. M. A.*, September 23d), reports the results of a series of experiments made with these drugs on patients with normal urinary reaction. While the observations are not numerous, he thinks that, so far as they go, they most emphatically disprove the assertion that salol, thymol, sodium, sodium sulphocarbonate and gualacol carbonate have the power of producing the diazo reaction in the urine of persons taking these drugs. He also made two experiments to test the persistency of this reaction in urine after long standing, with or without the addition of preservatives. Two samples of typhoid urine, one with the addition of 2 cc. of chloroform and one without, were allowed to stand for periods, respectively, of one week and forty-eight hours, and the reaction was found unimpaired.

PUBLICATIONS.

Manual of the Diseases of the Eye.—By CHAS. H. MAY, M. D., Fourth Edition. Wm. Wood & Co., New York, 1905. Price, muslin, \$2.00 net.

The fourth edition of the above work has just appeared with new additions in the way of illustrations and paragraphs bringing the book strictly up to date.

It is highly recommended to students and general practitioners on account of the concise yet thorough manner in which the subject is handled.

The excellent and numerous illustrations serve to elucidate the text in a most satisfactory manner. The work is to be especially commended for the colored plates which depict almost every disease of the eye. L. C. D.

A Compend of Histology.—By HENRY ERDMANN RADASCH, M. D. P. Blakiston's Son & Co., Philadelphia, 1905. Price, \$1.00.

This little volume is rather more comprehensive than the general run of "compend," and is correspondingly to be commended. The "compend" seems to have become a necessary evil, and so it would seem wise to recognize that fact. Used merely as a reminder—as a sort of extended note book, these little volumes have their own place and will doubtless be of use. The present volume seems to be well written and carefully edited; the information is less concentrated and consequently more useful than usual, and the illustrations are good and really "illustrate."

Practical Massage in Twenty Lessons.—By HARTVIG NISSEN, Instructor and Lecturer in Massage and Gymnastics at Harvard University Summer School; Director of Physical Training, Brookline Public Schools; Former Acting Director of Physical Training, Boston Public Schools; Former Instructor of Physical Training at Johns Hopkins University and Wellesley College; Former Director of the Swedish Health Institute, Washington, D. C., etc., etc. Author of "Swedish Movement and Massage Treatment," "A, B, C of Swedish Educational Gymnastics," "Rational Home Gymnastics," etc. With 46 Original Illustrations. 168 Pages. 12mo. Price, Extra Cloth, \$1.00 net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

The value of properly given massage seems to be more appreciated from year to year, and while the present book of Nissen's will be more valuable to the nurse or masseur, it will undoubtedly be of interest and value to many physicians who are only beginning to realize what good massage is really worth.

Dayton's Epitome of the Practice of Medicine.—A Manual for Students and Practitioners. By HUGHES DAYTON, M. D., Principal to the Class in Medicine, New York Hospital, Out-Patient Department; Clinical Assistant in Medicine, Vanderbilt Clinic, College of Physicians and Surgeons, Columbia University. In one 12mo volume of 324 pages. Cloth, \$1.00 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1905.

This volume is called "a manual for students and practitioners," but it should rather be regarded as an extended dictionary. To assume that the practice of medicine may be condensed into 324 small pages, would be absurd. Regarded as a dictionary in extenso, it appears to be a very useful volume. The student who learned his medicine from such a source, would have a very trifling amount of knowledge; but either the student who has learned his medicine from good teachers and more extended works, or the practitioner who occasionally needs a jog to his memory, will find this volume, used in the manner of an extended dictionary, very useful.

We acknowledge the receipt of the following:

On the Influence of Temperature Upon Cardiac Contraction and Its Relation to Influence of Temperature Upon Chemical Reaction Velocity.—By CHARLES D. SNYDER.

The Gas Disease in Fishes.—By M. C. MARSH, Assistant Bureau of Fisheries, and F. P. GORHAM, Associate Professor of Biology, Brown University.

The Catalogue of Officers and Fellows, Honorary Active, and Retired, Borne Upon the Rolls of the Massachusetts Medical Society.

Artificial Membrane Formation and Chemical Fertilization in a Starfish (*Asternia*).—By JACQUES LOEB.

A Treatise on the Development of the Pharmaceutical Still.—Lloyd Brothers, Cincinnati, Ohio.

Typhoid Fever Epidemic at Palo Alto, California.—By J. C. L. FISH, Assoc. M. Am. Soc., C. E.

The Immunity Unit for Standardizing Diphtheria Antitoxin.—By M. J. ROSENAU.

Transactions of the Florida Medical Association, 1905.

Medical Communications of the Massachusetts Medical Society, Vol. XX, No. 1, 1905.

The following reprints have been received:

Goat's Milk for Babies, and the Milk-Goat as a Part of Our Park System.—By ELIZA H. ROOT, M. D., Chicago, Illinois.

The Therapeutic Use of Water Drinking and Some of Its Dangers.—By ELIZA H. ROOT, M. D., Chicago, Ill.

The Cure of Leprosy.—By ISADORE DYER, Ph. B., M. D., New Orleans, La.

The Barber Shop in Society.—By ISADORE DYER, Ph. B., M. D., New Orleans, La.

A Preliminary Report on Cells Found in Yellow Fever, With Reference to Their Etiologic Significance.

Drs. Pothier, Hume, Watson and Couret, in the *Journal A. M. A.*, September 23d, report that after a careful study of the blood of yellow fever patients they noticed the regular occurrence of certain cells

hitherto unnoticed or not described. They state that these cells seem to be undergoing developmental changes which can be demonstrated in the stomach of a recently infected stegomyia. These cells are entirely extracellular, though occasionally some are seen lying on the red cells; and on one occasion one was seen within the protoplasm of a morpho-neutrophile leukocyte. They give in detail the methods of staining, and state that every effort was made to avoid sources of error. The stains were filtered, sterilized and examined, with negative results for other bodies.

Exstrophy of the Bladder.

H. M. Sherman, San Francisco (*Journal A. M. A.*, September 23d), reports a case of exstrophy of the bladder in a boy, successfully treated by Peters' method. This consists in dissecting out the ureters individually, keeping a small circular patch of bladder wall about the vesical orifice of each, and ablation of the rest of the bladder wall. Each ureter with its button of bladder wall is then drawn through a small slit in the rectal wall of its own side and left hanging from 1 cm. to 1.5 cm. into the rectal lumen. Sherman varied from Peters' technic in not retaining a catheter in the ureter after transplantation and also in using a suture at the rectal slits, including in the stitch a little of the peritoneal areolar tissue which had been kept with the ureter to carry its blood vessels. He thinks it might have been possible even to close up the abdomen at once had the patient been in better condition, as urinary leakage was impossible, but he followed Peters' method of temporarily packing the bladder wound. He was careful to leave the prostatic urethra untouched, and later succeeded in permanently closing it above. The child was thus left with the rectum acting as a bladder and the genital passages intact. The functional results were good from the first, and he thinks that ascending infection may be indefinitely postponed, and that the patient may go through life with comparatively little inconvenience and only an abdominal scar left as externally visible evidence of the operation.

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the liberal use of the odorless solution of metallic chlorides, commercially known as "Platt's Chlorides," is recommended for disinfecting the discharges, deodorizing and refreshing the air of the sick-room, by the most eminent physicians and sanitarians, among whom are;

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Dr. Benjamin Lee	- - -	Secretary, Pennsylvania State Board of Health
Dr. Thomas Darlington	- - -	President, New York Board of Health
Dr. Samuel H. Durgin	- - -	Health Physician, Boston, Mass.
Dr. Heman Spalding	- - -	Chief Health Inspector, Chicago, Ill.

For disinfecting dejecta, dilute one part chlorides with 4 parts water.

For deodorizing by sprinkling and for moistening towels or cloths to be suspended in the sick-room, dilute one part chlorides with 10 parts water.

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